IBM WebSphere Business Modeler V6.2: Process Mapping and Analysis

(Course code WB284 / VB284)

Instructor Exercises Guide

ERC 1.0

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WebSphere Education

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Instructor exercises overview

The objectives of the exercises are for the students to successfully:

- Create a business process diagram using the process editor
- Create definitions and structures for modeling elements
- Link requirements with Rational RequisitePro
- Validate a model and perform static analysis
- Identify project management capabilities and methodologies
- Create a process model based on a business scenario
- Perform team collaboration support for version control
- Perform team collaboration using WebSphere Business Modeler Publishing Server
- Import Visio diagrams to WebSphere Business Modeler
- Set up and run a simulation
- Conduct dynamic analysis
- Identify methods for process improvement
- Create custom queries and reports
- Understand the purpose of business measures
- Export projects from WebSphere Business Modeler

All the exercises depend on the previous exercises being successfully completed.

Exercises configuration

In the lab students have their own individual systems and students work independently.

Exercises description

This course includes the following exercises:

- Refer to Table of Content

In the exercise instructions you will see each step prefixed by a line. You may wish to check off each step as you complete it to keep track of your progress.

Most exercises include required sections which should always be completed. These may be required before performing later exercises. Some exercises may also include optional sections that you may wish to perform if you have sufficient time and want an additional challenge.

This course includes two versions of the course exercises, “with hints” and “without hints”.

The standard “Exercise instructions” section provides high-level instructions for the tasks you should perform. You need to apply the knowledge you gained in the unit presentation to perform the exercise.

The “Exercise instructions with hints” provide more detailed instructions and hints to help you perform the exercise steps.

Exercise 1. There is no exercise for this unit

Exercise 2. Creating a simple process

Estimated time

01:00

What this exercise is about

This exercise covers the basic modeling elements by creating a simple process in WebSphere Business Modeler.

What you should be able to do

At the end of the exercise, you should be able to:

- Add tasks and decisions to a model
- Connect model elements and associate data with the connections
- Explore and navigate WebSphere Business Modeler

Requirements

WebSphere Business Modeler V6.2 must be installed.

Instructor exercise overview

This lab provides steps for importing a sample project and creating a simple process using WebSphere Business Modeler. This is the first lab for the student to use Modeler.

How to use the course exercise instructions

Each exercise is divided into sections with a series of steps and substeps. The step represents an action to be performed. If required, the substeps provide guidance on completing the action. **For example:**

__ 1. Create a user account named `WBIADMIN`.

 __ a. Right-click **My Computer** and choose **Manage** from the shortcut menu.

 __ b. Expand **Local Users and Groups**.

In this example, the creation of a new user account is the action to be performed. The substeps underneath provide specific guidance on how to create a new user account in Windows. Words highlighted in bold represent menu items, field names, and so forth.

Each step and substep is preceded by an underscore. You are encouraged to use these markers to track your progress. As you complete a step, place an x or a checkmark on the underscore to indicate it is completed. Tracking your progress in this manner enables you to stay focused in case of interruptions during a lengthy exercise.

Logging into your machine and starting the VMware image

The products used in this course are pre-installed on a VMware image. VMware is a virtual machine, a working operating system that interacts with the host machine's operating system. This is similar to running another personal computer inside your desktop.

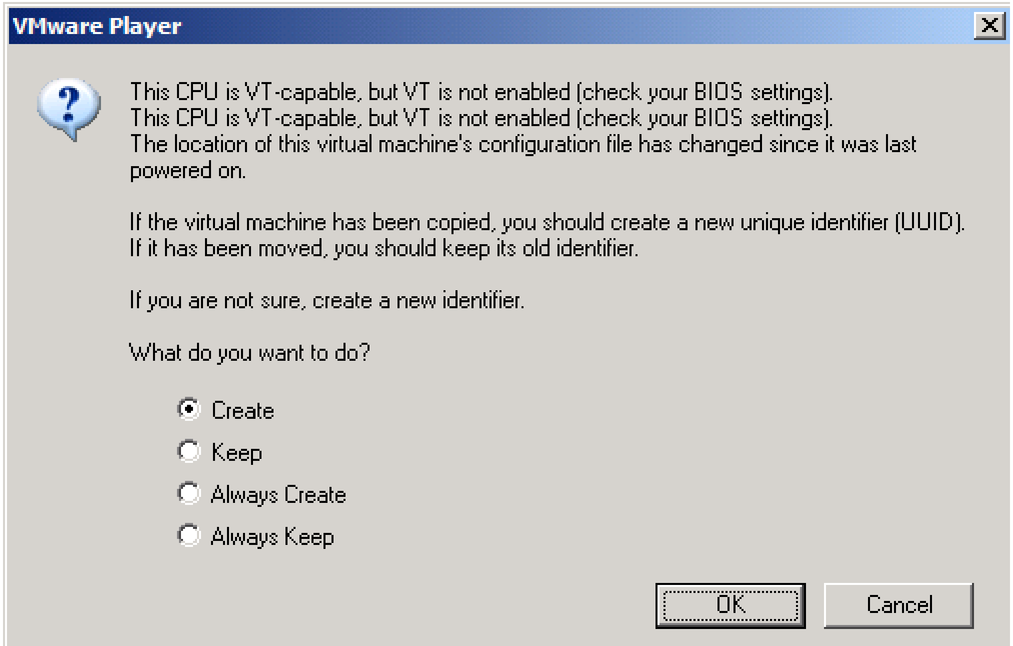
VMware is not an IBM product and does not come with the products used in this class. The use of VMware in this course is intended for educational purposes only, and is not recommended in a production environment. Note the following:

- The operating system used in the VMware image for this class is Windows XP.
- Do not confuse the VMware operating system with the host computer's operating system.
- Use VMware Player in full screen mode to ensure you use the VMware operating system, not your host computer's operating system.
- Because of the overhead of running a virtual machine on your system, IBM products installed in VMware run more slowly than they would if they were installed directly onto your desktop.

To log into your lab station's host machine, use the username and password given to you by your instructor. The username and password for the host machine will differ depending upon how the machines are configured at your site.

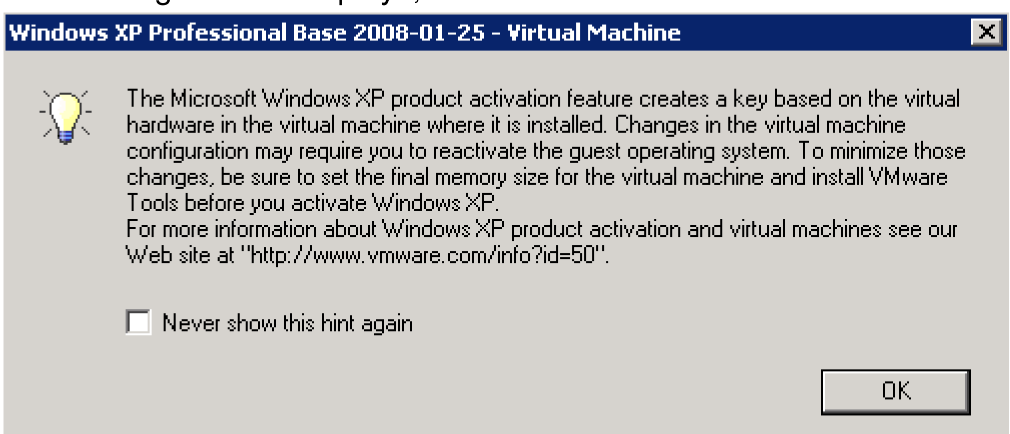
To log onto your VMware image, double-click the VMware Player shortcut on your desktop. If the.VMX shortcut for your course image is not automatically displayed, your instructor will provide you with the location of the appropriate .VMX file.

__ 1. If the following window displays after start the VMware image, select **Create**.



__ 2. Click **OK**.

__ 3. If the following window displays, click **OK**.



__ 4. Once the VMware image has started, log into the image using:

- Username: **`Administrator`**
- Password: **`web1sphere`**

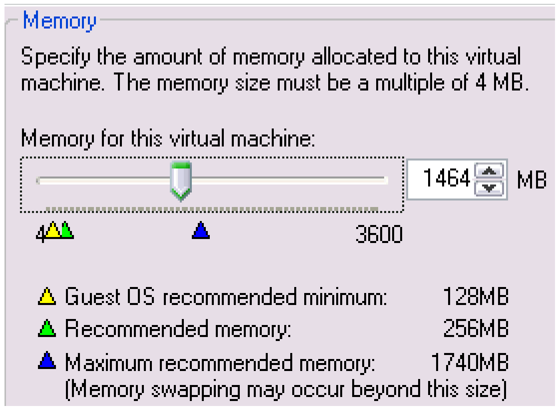
Changing the VMware memory allocation

The VMware image for this course is configured to use approximately 2GB of memory. If your machine has greater than 2GB of memory, you can adjust the memory settings to allocate more memory to VMware. This will increase the performance of the image. If you are unsure of the amount of memory available on your machine, ask your instructor for assistance.

__ 1. To allocate additional memory to your VMware image:

__ a. Select **VM > Settings > Change Memory Allocation**.

__ b. Move the toggle to a setting just below the **Maximum recommended memory** (the blue triangle) and click **OK**.



Warning

Do not choose or exceed the maximum recommended memory. If you do, the performance of the image will be ***severely*** impacted.

__ 2. When you receive the "**The memory value change will not take effect until the next time you reset or power on the virtual machine**" dialog, click **OK**.

__ 3. Select **Player > Troubleshoot > Reset**.

__ 4. When the virtual machine restarts, log in with the password **`web1sphere`**

Exercise instructions

During the lab exercise, you will see the following note symbol:

Note

This note area will provide you with important supplemental information, further explanations, or an alternate way to complete a specific step.

Business scenario: The Big Apple Consulting is an IT consulting service company. Big Apple Consulting assigns their consultants or technicians to help the customers on engagements. You will create a project in WebSphere Business Modeler called Staffing Project and a process model called Fill Staff Request. This process will document how a project manager assigns consultants to different engagements. Based on a simple decision, the project manager will determine where to place resources to fill the staff request. If consultants are available to work, then the project manager can assign them. However, if none are available, the project manager will have to contact a business partner to locate external resources to fill the request.

Part 1: Starting WebSphere Business Modeler and creating a project

Note

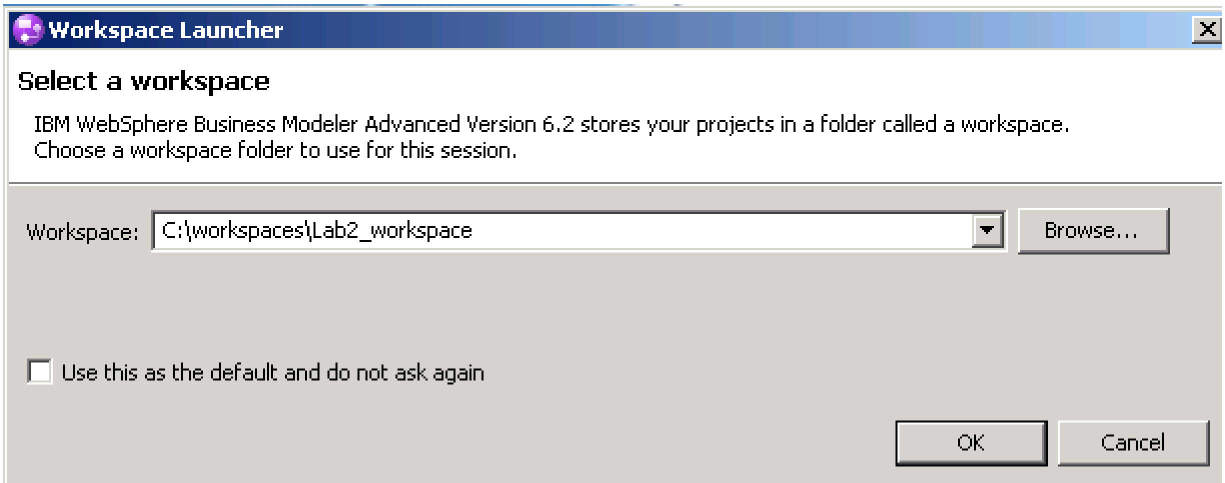
If you are using a VMware image, use the following login credentials for Windows:

User name: `administrator`

Password: `web1sphere`

__ 1. Click the WebSphere Business Modeler icon on your desktop.

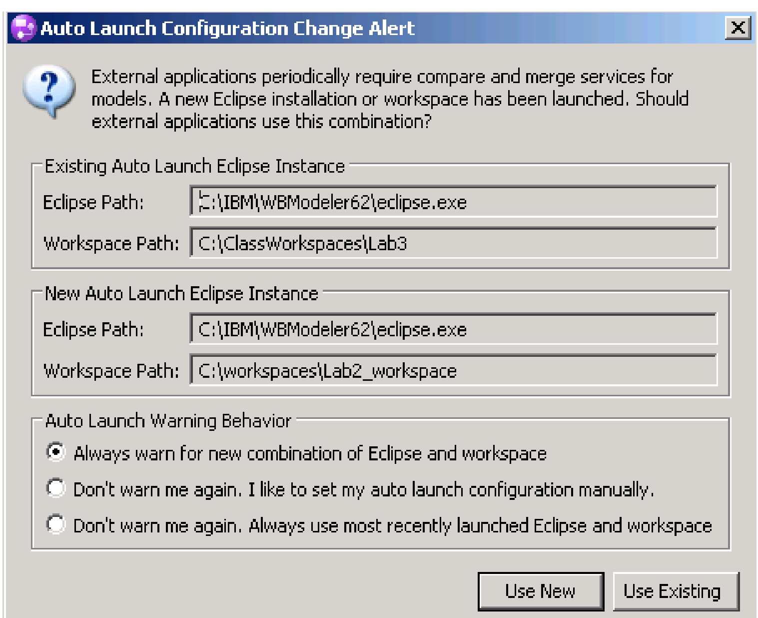
__ a. Type the following path: **`C:\workspaces\Lab2_workspace`**



Do **not** select the **Use this as the default and do not ask again** check box, as you will be specifying a different workspace when starting WebSphere Business Modeler in the future.

__ b. Click **OK**.
It takes a moment for WebSphere Business Modeler to launch, and the **Welcome** screen appears.

__ c. If the **Auto Launch Configuration Change Alert** window appears, click **Use New** to change the auto-launch workspace to the path of the current lab.



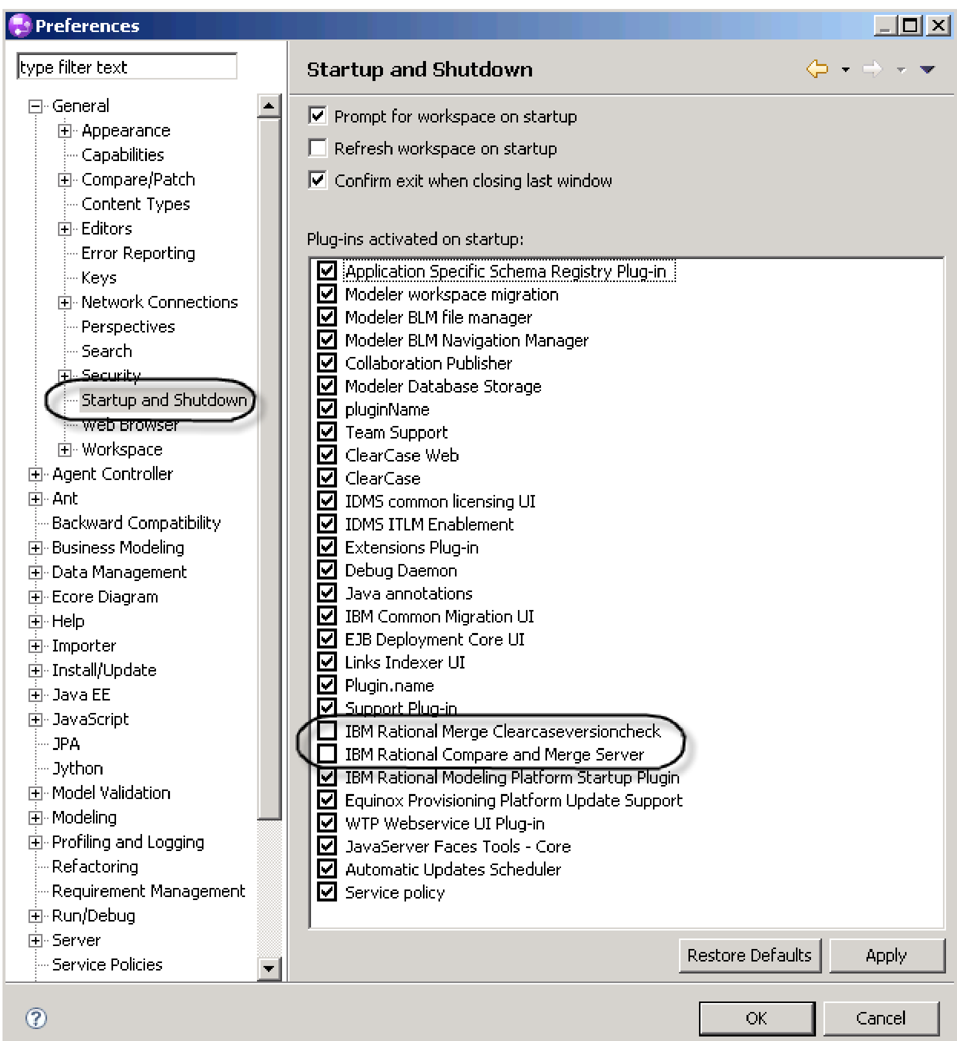
Note

The **Auto Launch Configuration Change Alert** message is about the ClearCase Type Manager. Rational ClearCase has been installed in the VMware and will be introduced and used later in this course. The ClearCase Type Manager, which is used by Rational ClearCase to resolve code (or model) conflicts, requires an instance of Eclipse to be specified. When you launch a new instance of Eclipse, this dialog box alerts you of the new configuration and asks if you want to change the settings stored for the Auto Launch Eclipse instance. To prevent the "Auto Launch Configuration Change Alert" message from appearing automatically each time you start a new workspace, go to the preferences menu in WebSphere Business Modeler (**Windows > Preferences**), navigate to **General > Startup and Shutdown** and clear the following two checkboxes:

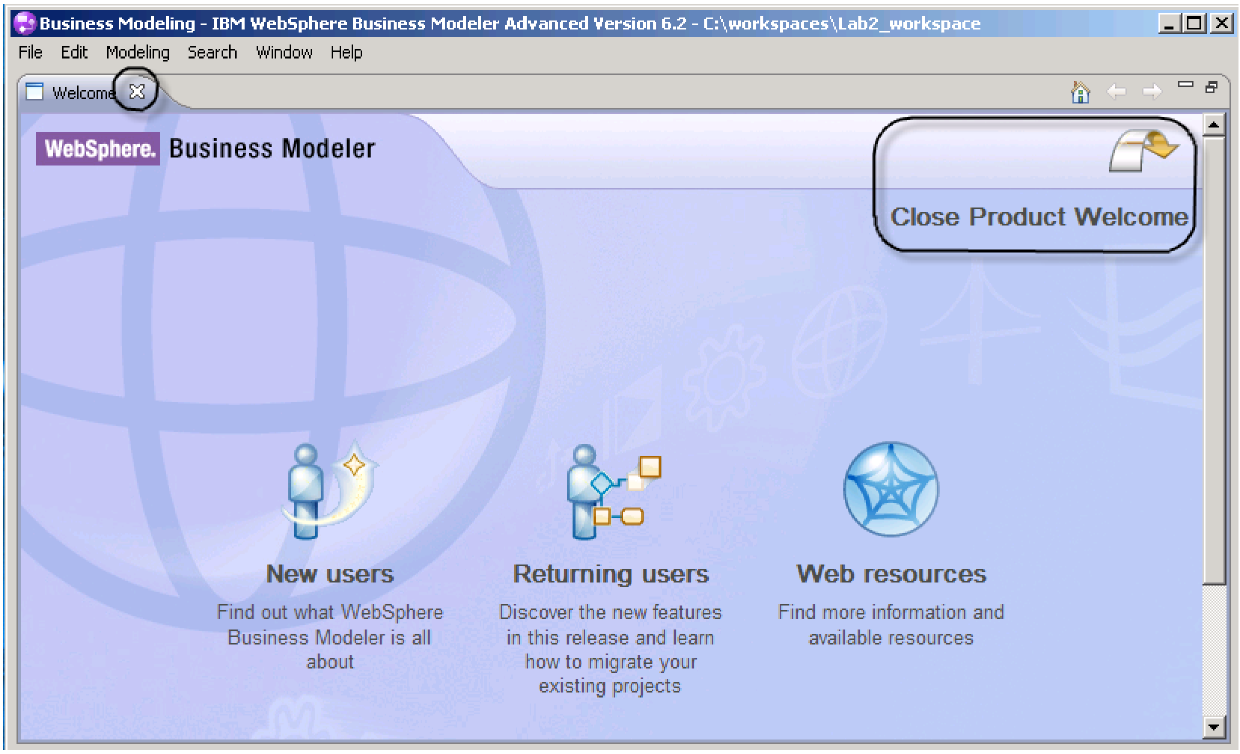
- IBM Rational Compare and Merge Server

- IBM Rational Merge Clearcaseversioncheck

Click **Apply** and then **OK** to save your preferences.



__ 2. Close the **Welcome** screen by clicking the **X** in the **Welcome** tab on the left or the **Close Product Welcome** link on the right.



The **Start Process Modeling** window appears.

__ 3. In the **Start Process Modeling** window, create a project called `Staffing Project` with the following names for some of its elements:

Process catalog name: `Process Catalog`

Business process name: `Fill Staff Request`

Data catalog name: `Data Catalog`

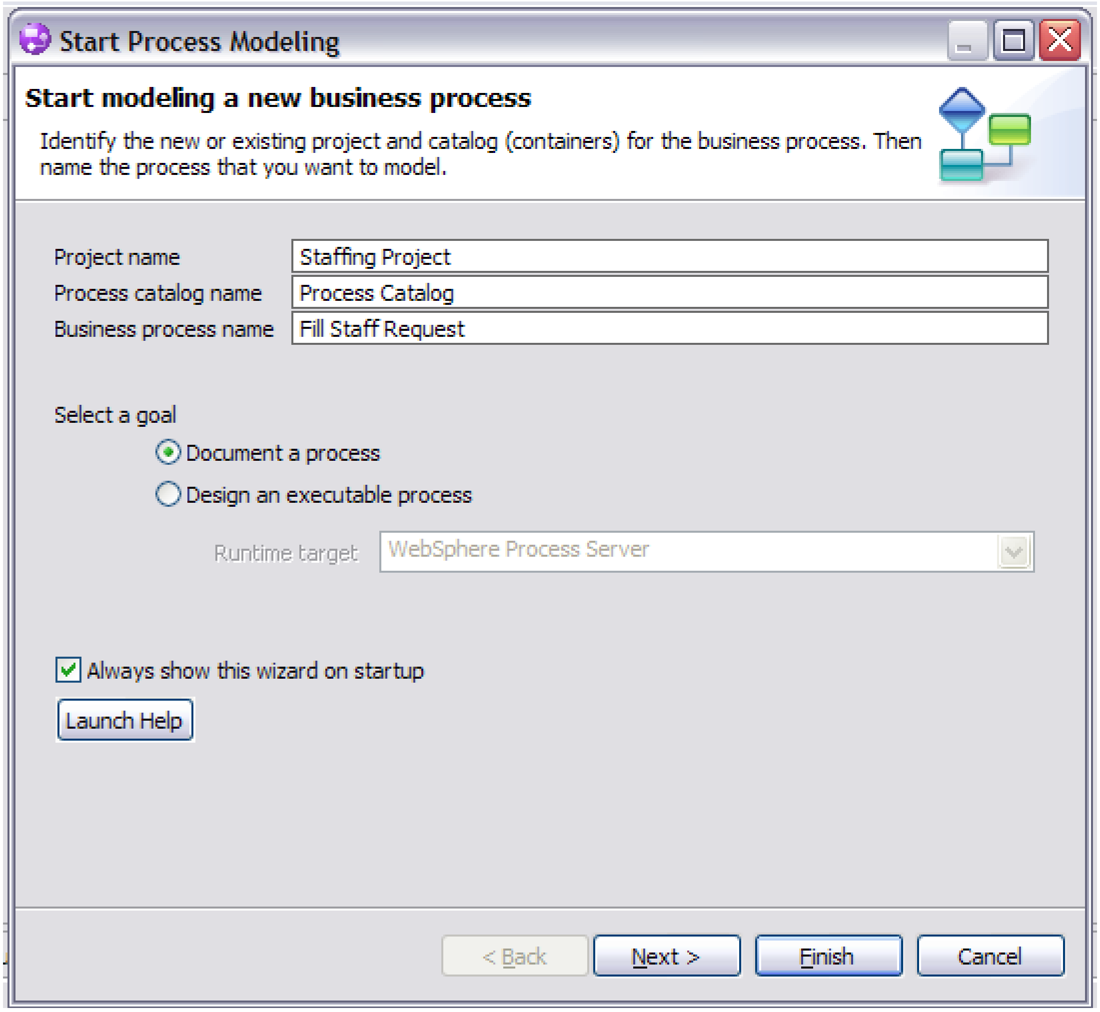
Business item name: `Staff Request`

__ a. From the **Start Process Modeling** window, type the following values:

Project name: `Staffing Project`

Process catalog name: `Process Catalog`

Business Process name: `Fill Staff Request`

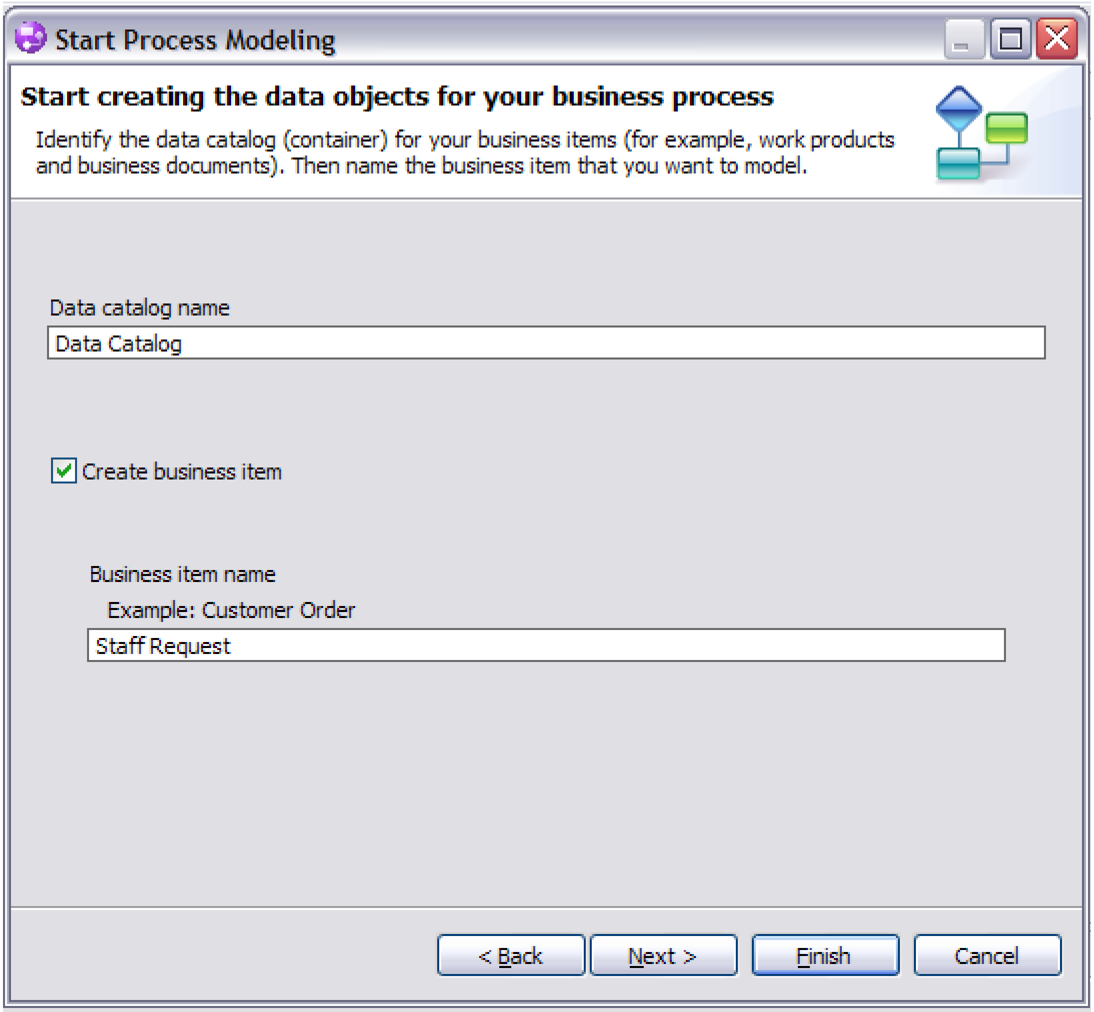


__ b. Click **Next**.

__ c. Type the following values to identify the data to be used in your project:

Data catalog name: `Data Catalog`

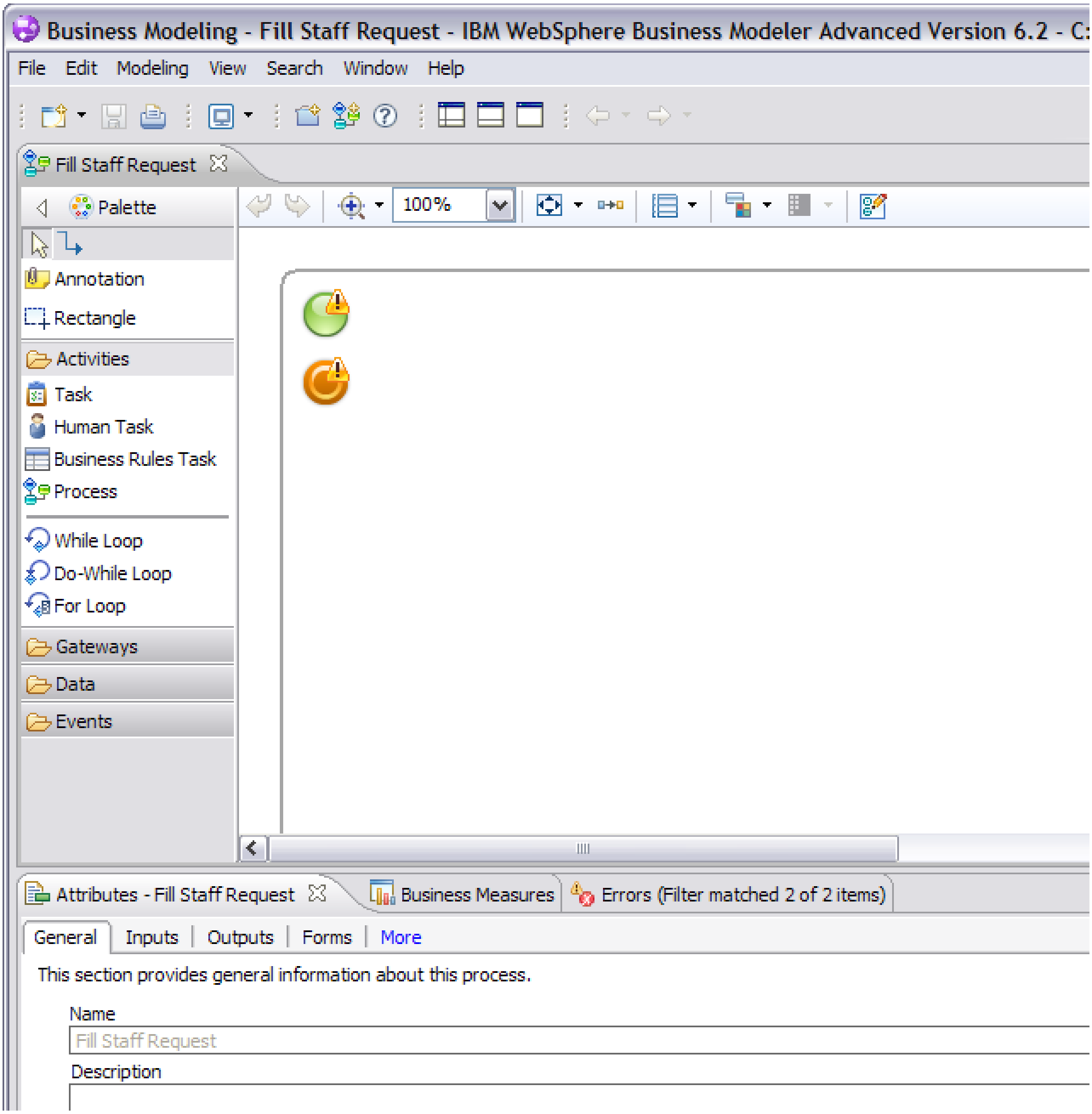
Business item name: `Staff Request`



__ d. Click **Finish**.

Wait for WebSphere Business Modeler to finish creating the project.

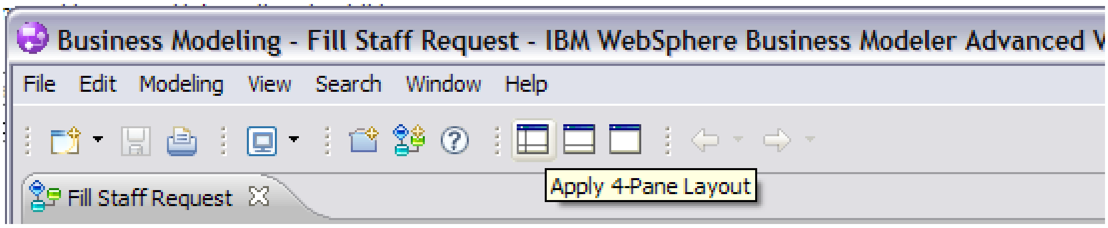
The process editor for **Fill Staff Request** displays.



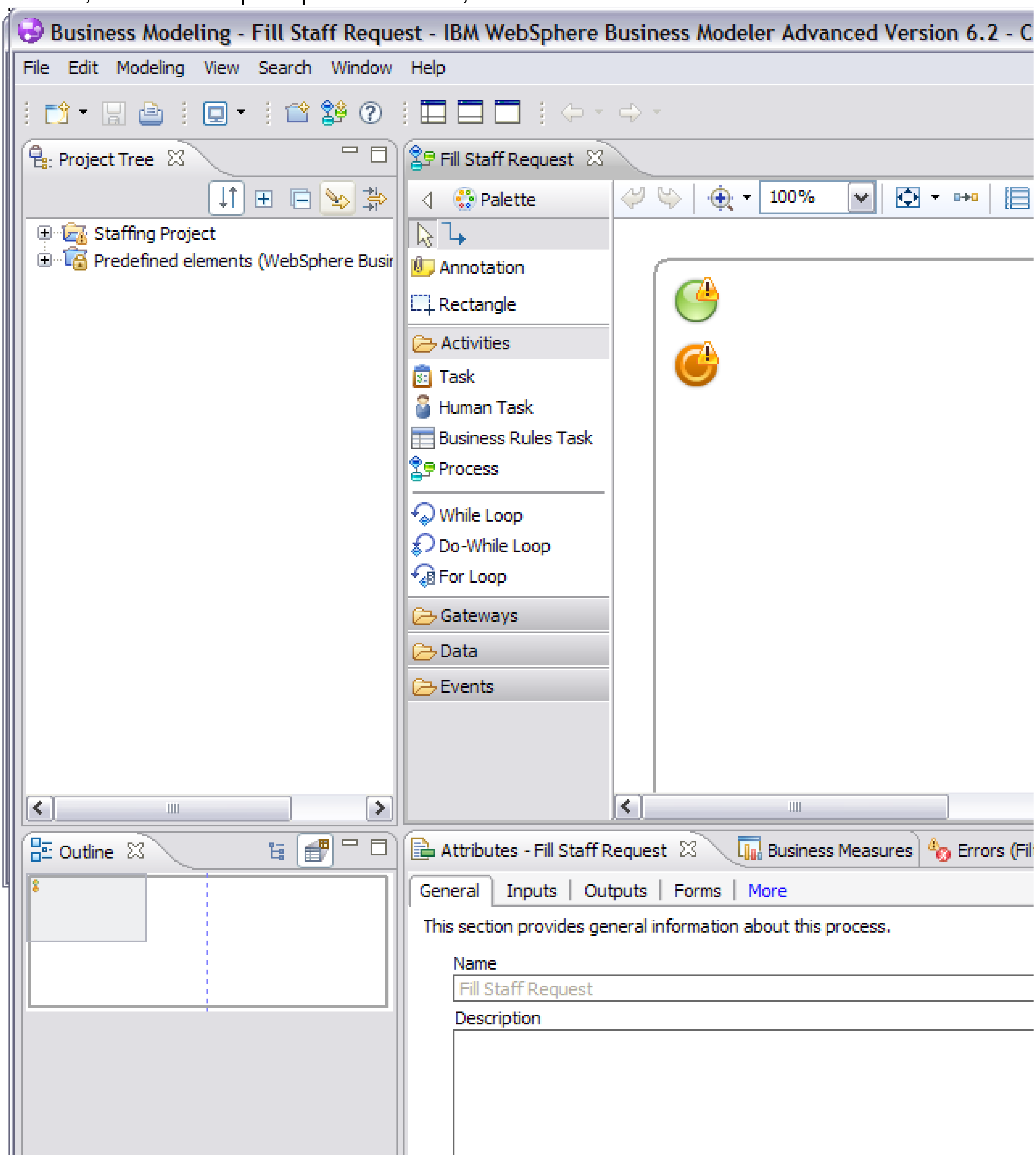
Note

The warning symbols (⚠) on both the Start and Terminate nodes are caused by missing incoming connections. The warnings will disappear after the diagram is saved at a later step.

__ 4. Click the **Apply 4-pane layout** button from the toolbar.



WebSphere Business Modeler now displays the following four panes: Project Tree, Outline, Fill Staff Request process editor, and Attributes views.

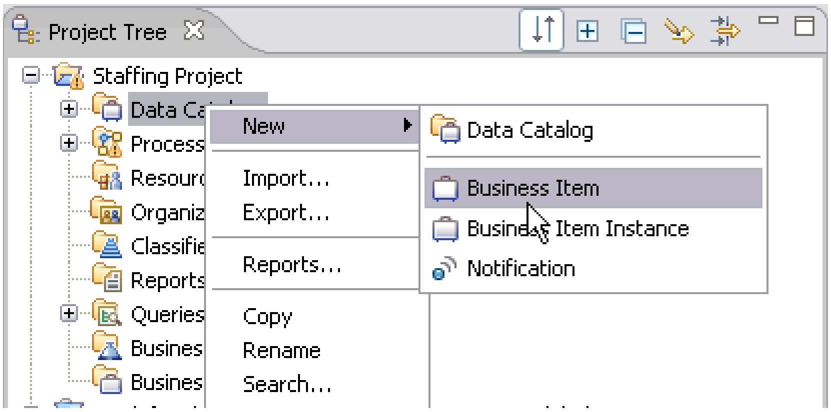


Part 2: Adding a business item

__ 1. Add a business item called to **`Assignment Notification`** to **Data Catalog**.

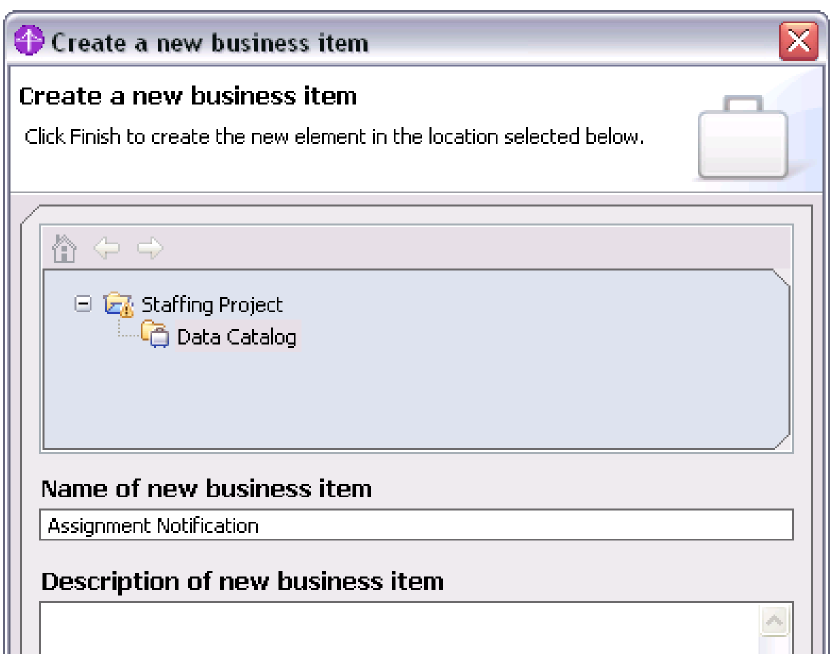
__ a. In the Project Tree, expand **Staffing Project** by clicking the + button next to the project name.

__ b. Add a business item by right-clicking **Data Catalog** and selecting **New** > **Business Item**.



The **Create a new business item** dialog box appears.

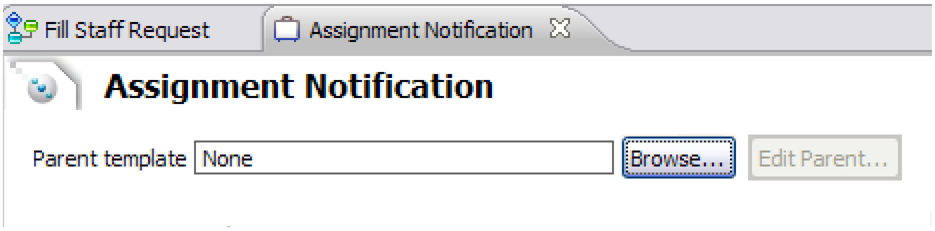
__ c. In the **Create a new business item** window, verify that Data Catalog is selected and type the following name for the new business item: **`Assignment Notification`**



__ d. Click **Finish**.

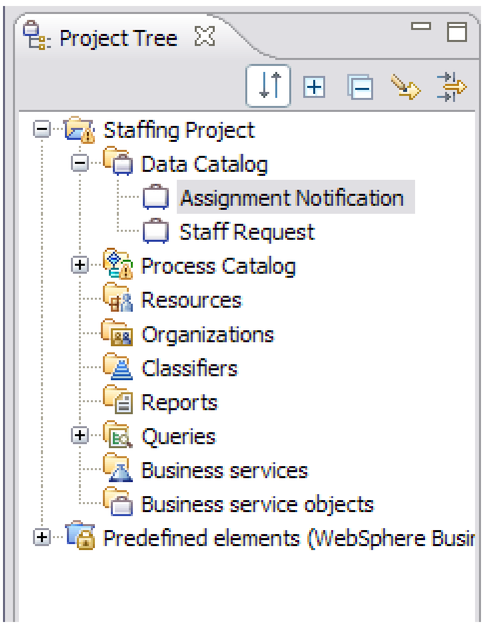
An editor for the business item opens. You will not enter any attributes at this time.

__ e. Close the editor for **Assignment Notification**.



__ 2. Verify that the following two business items are listed in the Project Tree: Staff Request and Assignment Notification.

Recall that Staff Request was added when you first created the project from the **Start Process Modeling** window.



Part 3: Constructing the process diagram

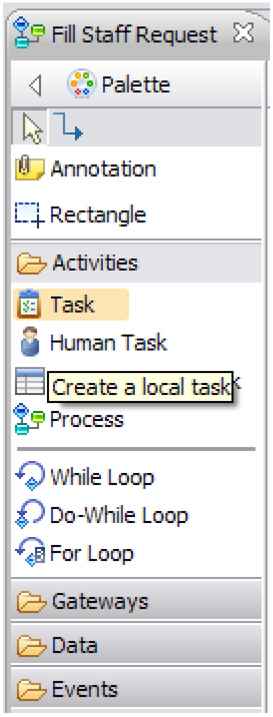
Notice that the start and terminate nodes are placed in the diagram by default. The terminate node is placed automatically at the top left corner of the diagram.

__ 1. From the Project tree, expand the Process Catalog, double-click **Fill Staff Request**.

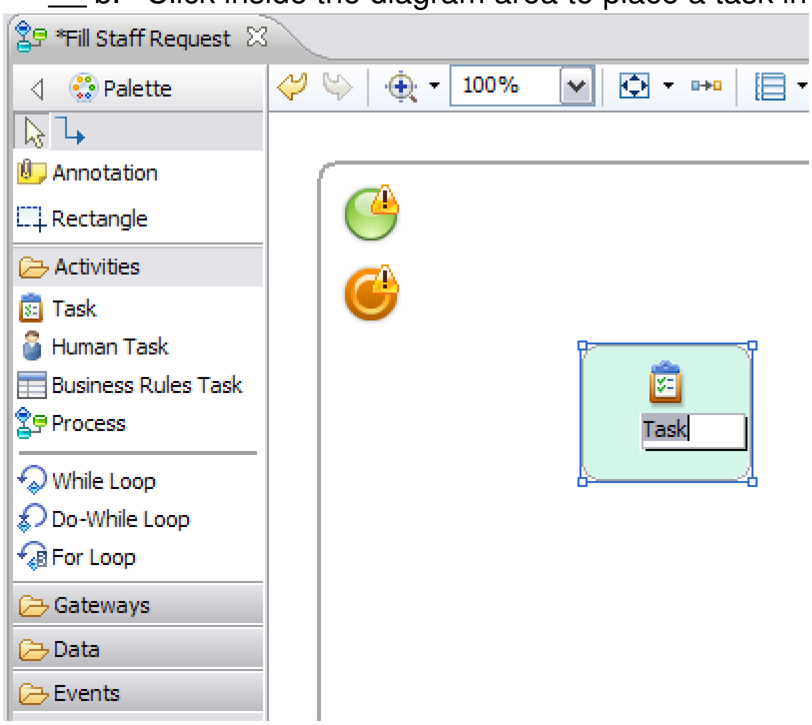
__ 2. Maximize the process editor view by double-clicking the **Fill Staff Request** tab. You can also use the **Apply 1-pane layout** button from the toolbar to achieve the same effect.

__ 3. Add a local task called **`Review Staff Request`** to the diagram.

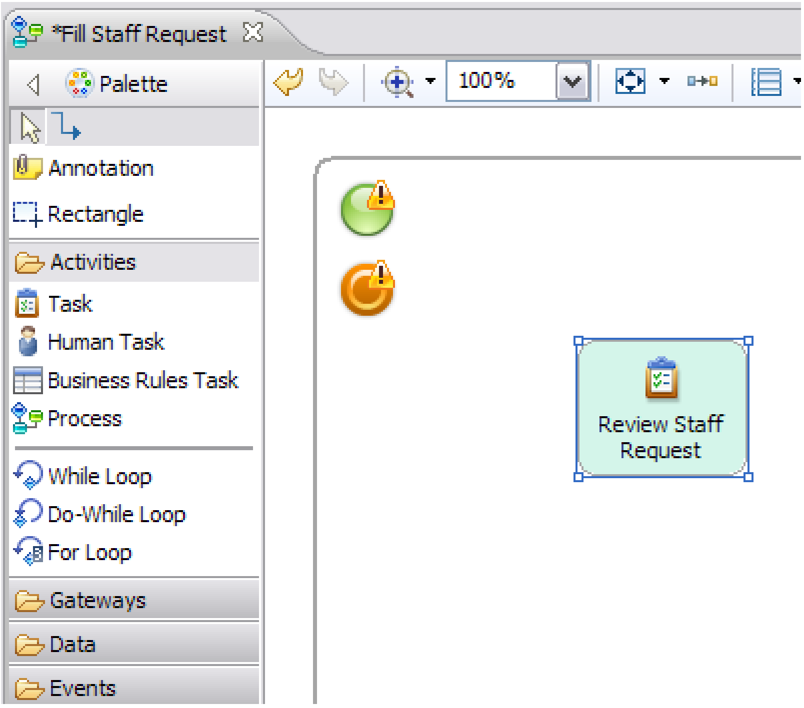
__ a. Click the **Create a local task** button, located beneath the **Activities** drawer in the palette of the process editor.



__ b. Click inside the diagram area to place a task in that location.



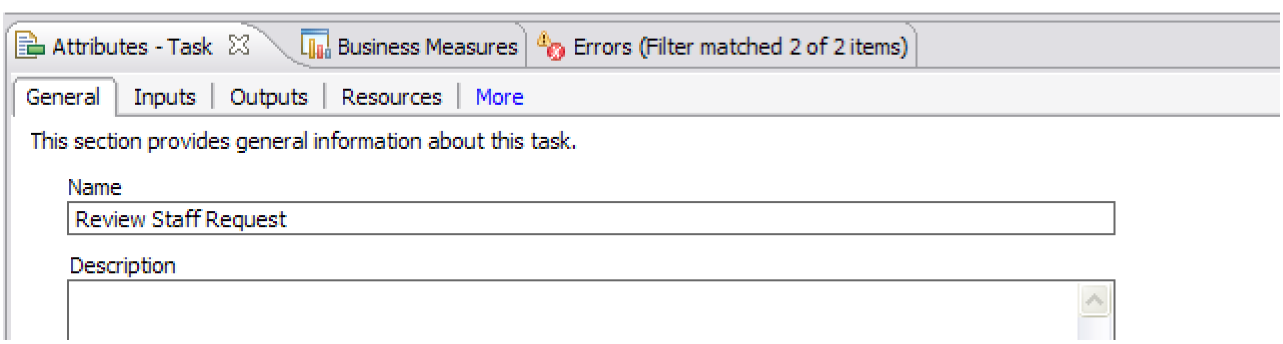
__ c. Rename the task from **`Task`** to **`Review Staff Request`** and press **Enter**.



Note

There are two ways to rename a task:

- With the task already selected, single-click the task and enter the new name, or
- Select the task in the diagram and enter the new name in the Attributes view (in 2-pane or 4-pane layout), as shown below:



__ 4. Click the **Create local task** button in the palette again. This time, hold down the Shift key on the keyboard while clicking inside the diagram in four different locations to add four more tasks. Rename the new tasks to the following:

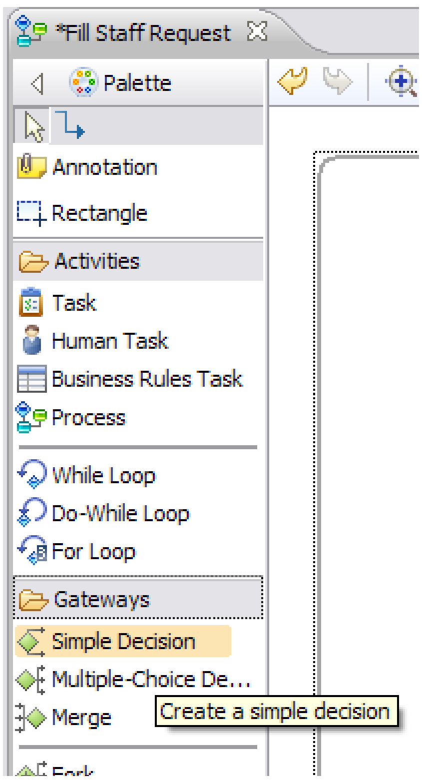
`Check Consultant Availability`
`Assign Team`
`Contact Business Partner`

`Notify Employee`

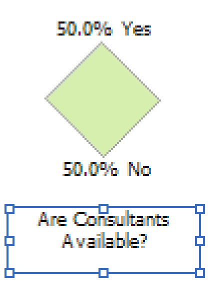
At this time, it is **not** necessary to arrange the tasks neatly.

__ 5. Insert a simple decision named **`Are Consultants Available?`**

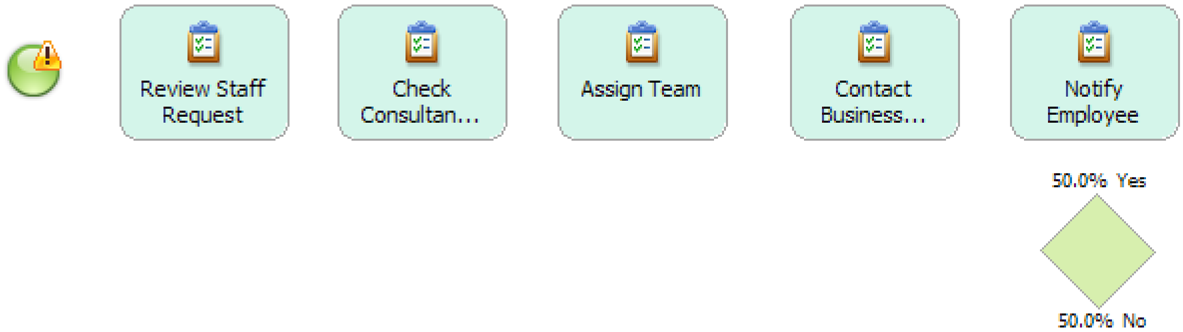
__ a. Click the **Create a simple decision** button, located beneath the **Gateways** drawer in the palette of the process editor, and drop it on to the diagram.



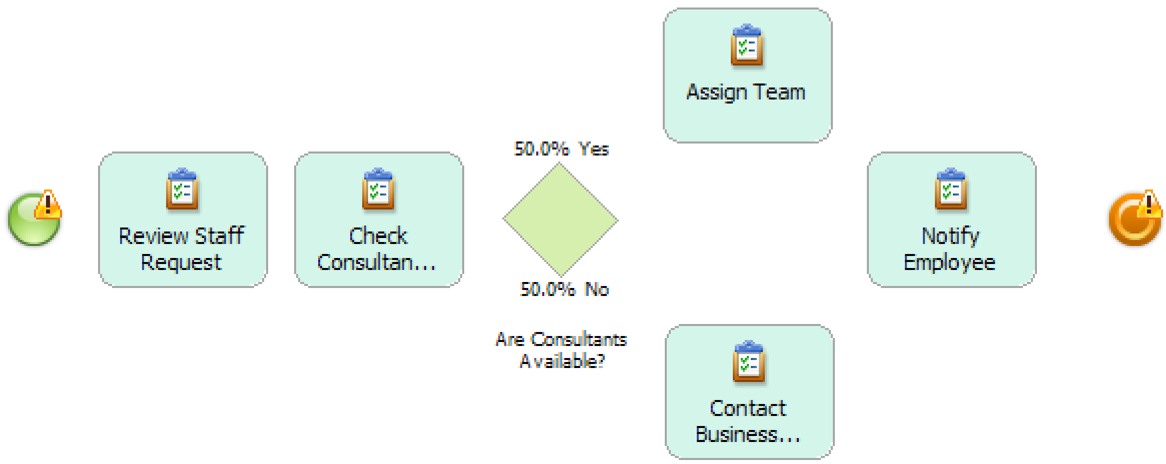
__ b. Rename the decision to **`Are Consultants Available?`**



Your diagram should now contain the following elements:



__ 6. Arrange the elements in the diagram as follows:

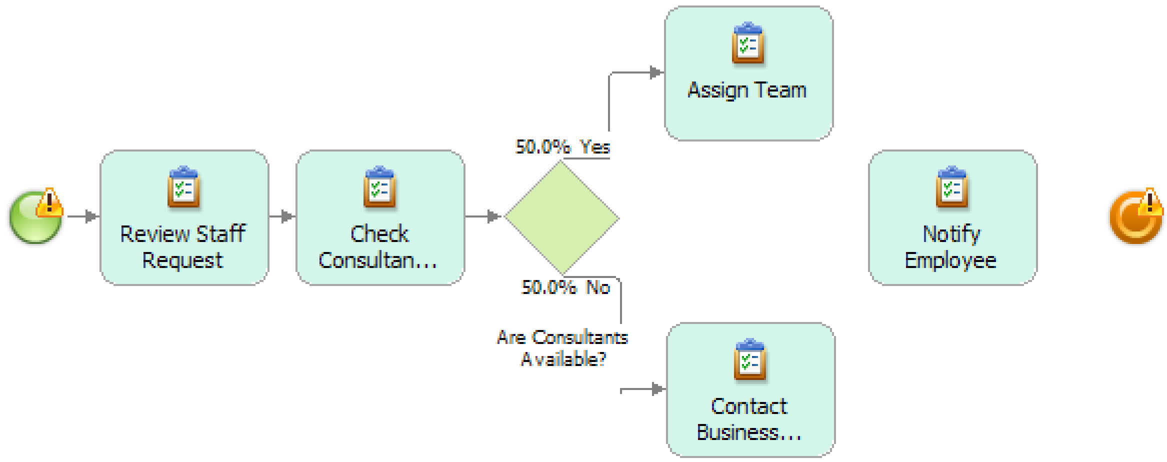


__ 7. Connect the **Start** node to the **Review Staff Request** task.

__ a. From the palette, click the **Create Connection** button ( ). Note that your cursor has switched to a connection mode.

__ b. Click the green **Start** node and then the **Review Staff Request** task to add a connector between the two elements.

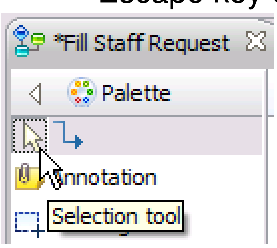
__ 8. Connect the tasks with the decision in the diagram as follows:



Note

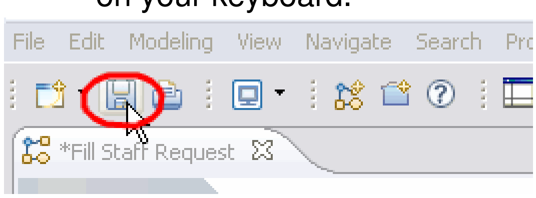
Do not connect the decision with the rest of the tasks yet. This will be done later in this exercise.

__ 9. Exit the connection mode by clicking the arrow button in the palette or pressing the Escape key on your keyboard.



__ 10. Note that there is an asterisk (*) next to the **Fill Staff Request** tab. This indicates that there are unsaved changes.

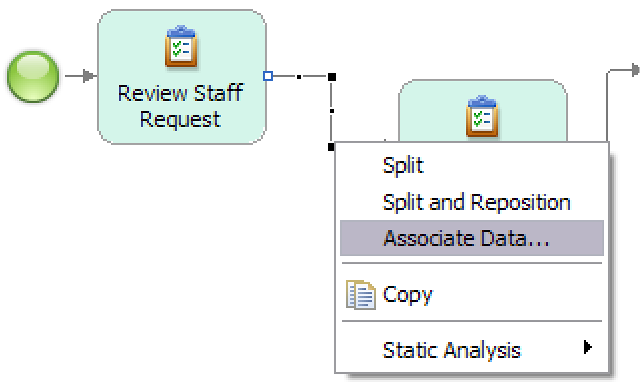
__ 11. Save your changes by clicking the **Save** button on the toolbar or by pressing Ctrl+S on your keyboard.



Part 4: Associating business items

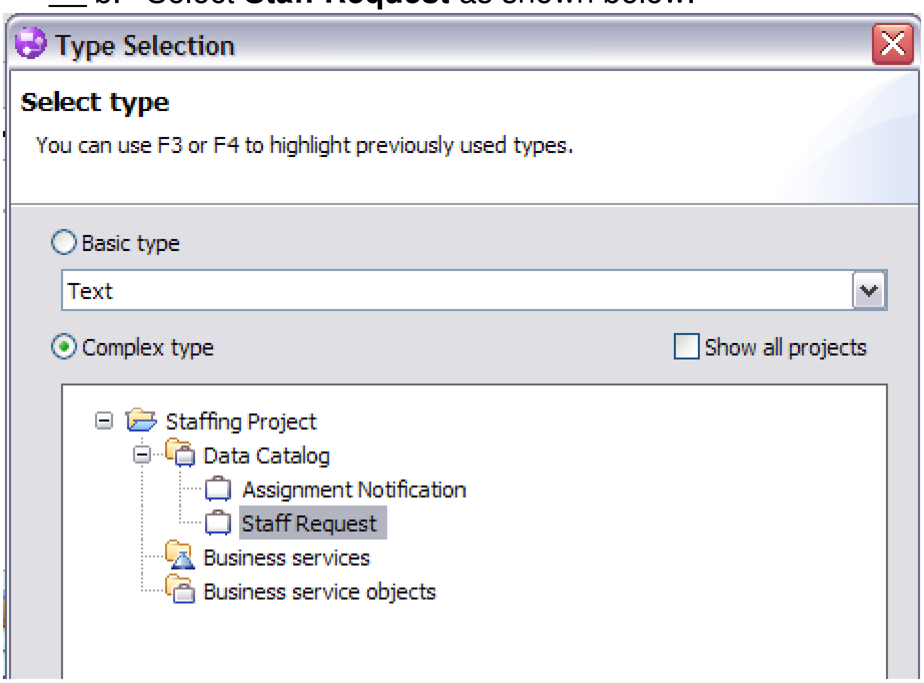
__ 1. Associate the connection between the **Review Staff Request** and **Check Consultant Availability** tasks with the **Staff Request** business item.

__ a. Right-click the connection between the **Review Staff Request** task and the **Check Consultant Availability** task and select **Associate Data**.



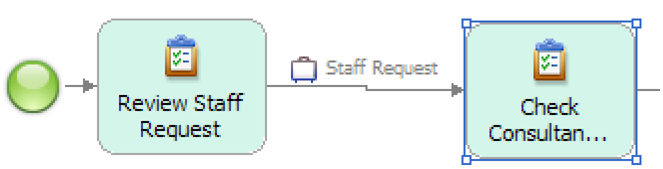
The **Select Type** dialog box displays.

__ b. Select **Staff Request** as shown below.



__ c. Click **OK** to continue.

In the diagram, the **Staff Request** business item is now associated with the connection between the **Review Staff Request** task and the **Check Consultant Availability** task.



Note

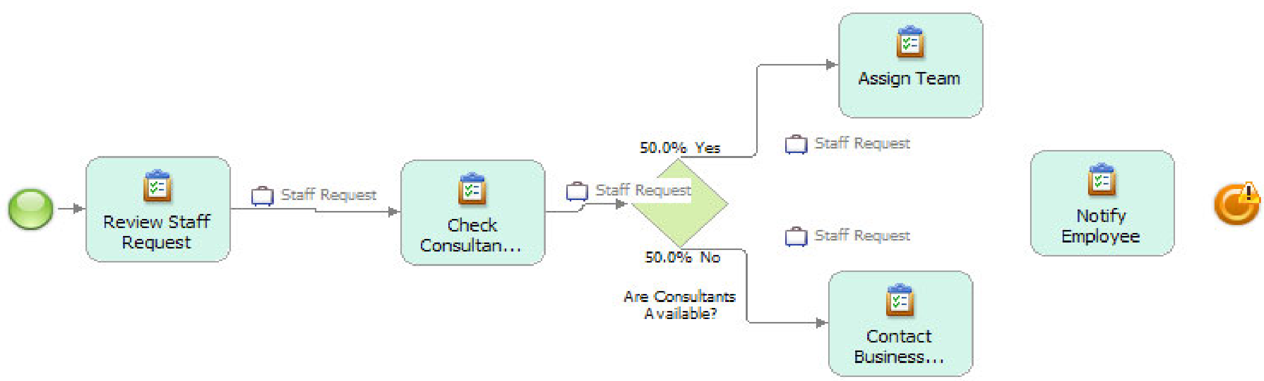
A **business item** is a business document, work product, or commodity that is used in business operations. In WebSphere Business Modeler, it is represented by a set of attributes. Components of the business integration system use business items to exchange information and trigger actions.

Examples:

- Manufacturing order, mother board, power supply, and memory chip (in a PC assembly process)
- Itinerary and customer information record (in a trip reservation process)
- Passenger (in a transportation process)

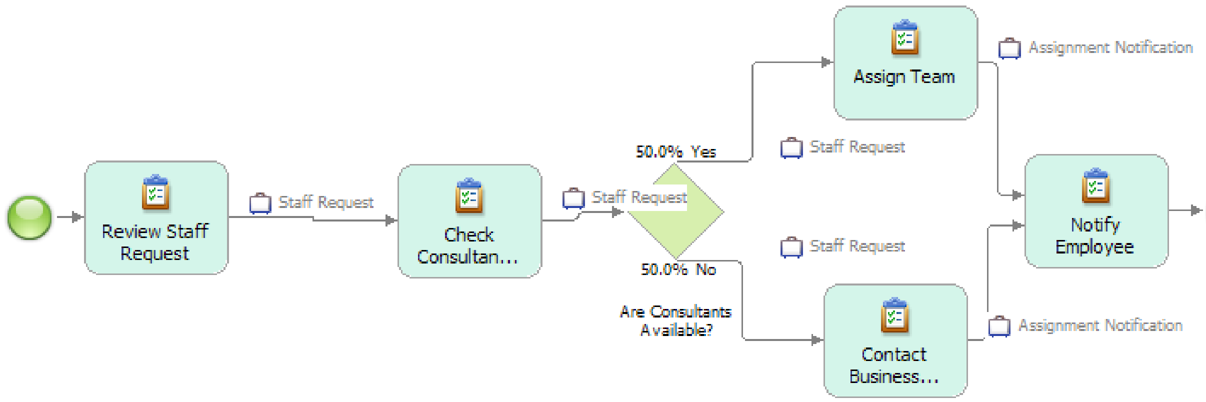
__ 2. Repeat the previous steps to associate the **Staff Request** to the connection between the **Check Consultant Availability** task and the decision.

__ 3. Connect the decision object to its surrounding the tasks as follows:



The connections for the **Yes** and **No** paths out of the decision will be associated with the Staff Request business item automatically.

__ 4. Connect the remaining elements and associate the connections with the **Assignment Notification** business item as follows:



__ 5. Save changes made to the diagram (Ctrl+S).

Now you have finished your first process diagram on Modeler.

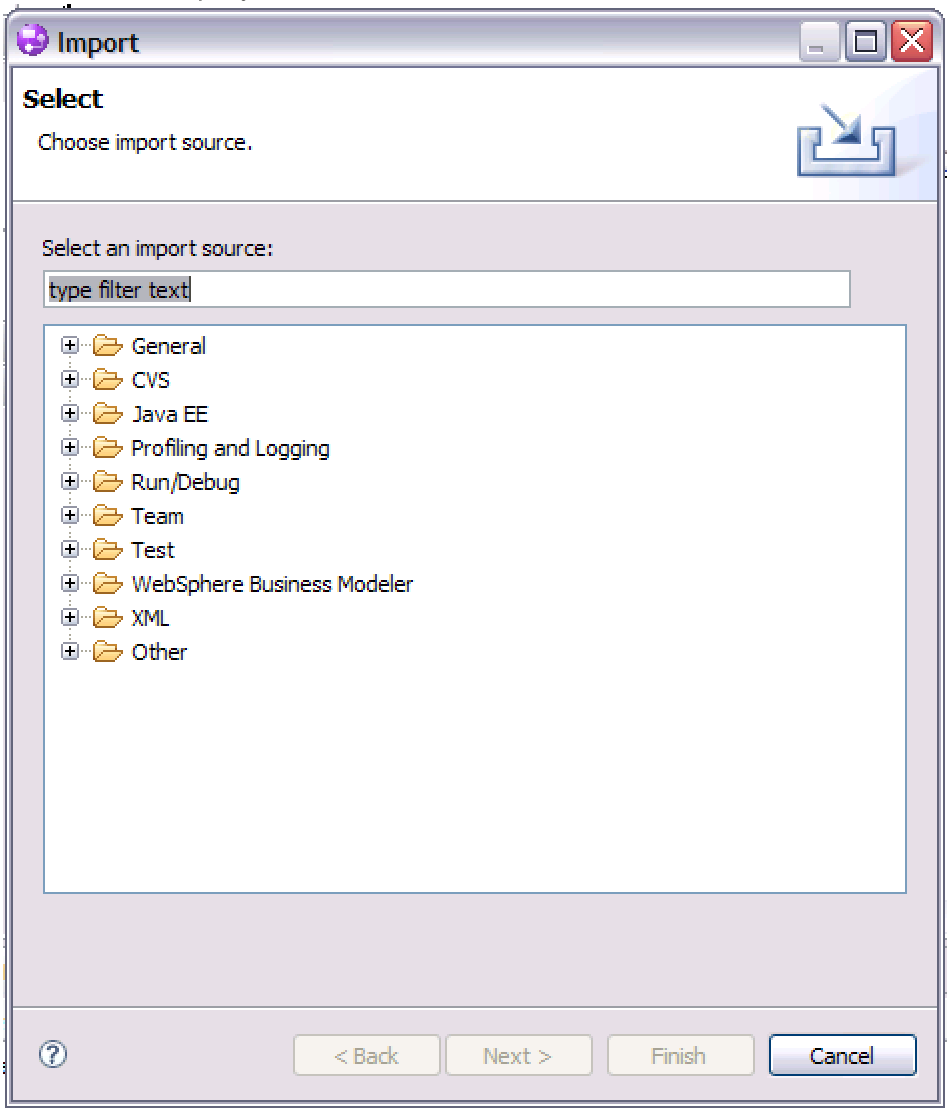
Next, you will learn how to import a project into your current workspace.

Part 5: Importing a project

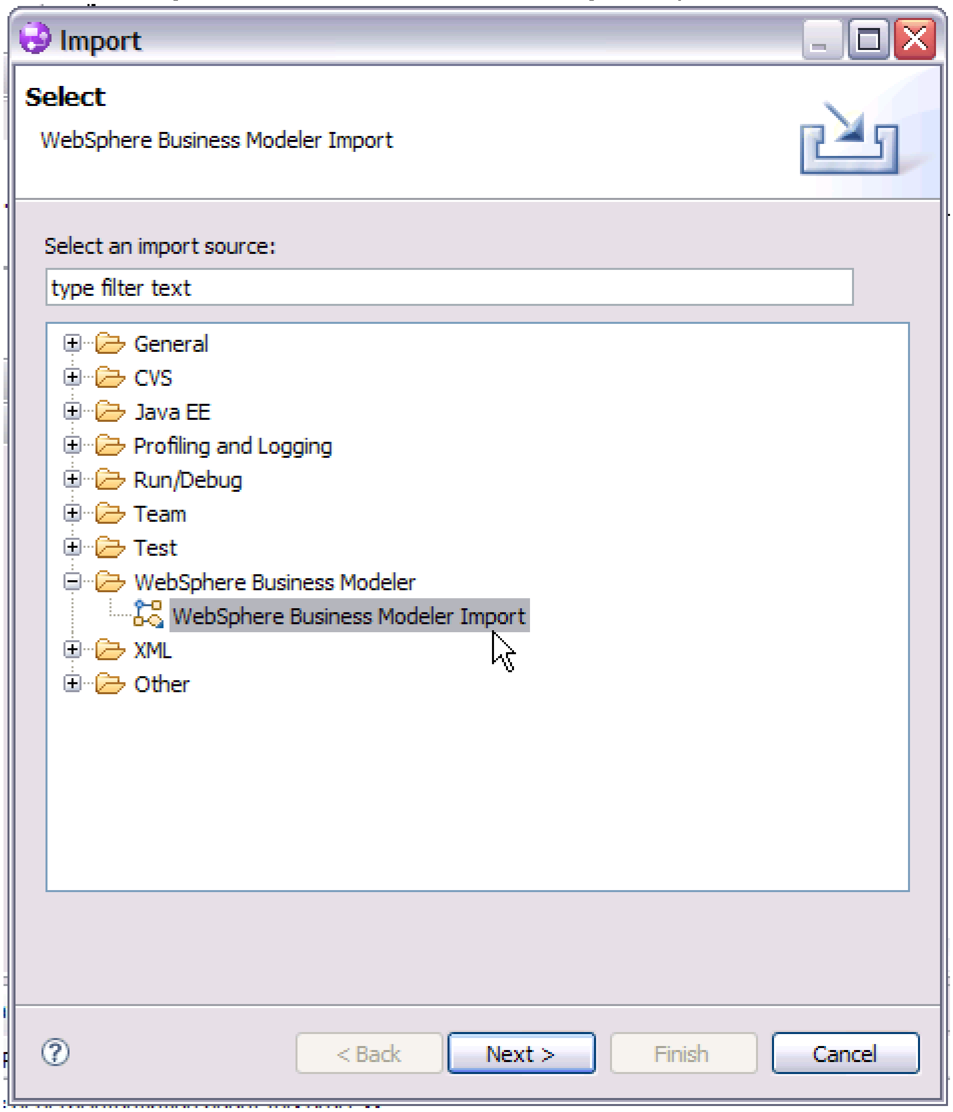
This section will guide you in importing a sample project into your workspace.

__ 1. In WebSphere Business Modeler, click **File > Import**.

The **Import** window is displayed.



__ 2. Under **Select an import source**, expand **WebSphere Business Modeler** and select the **WebSphere Business Modeler Import** option.



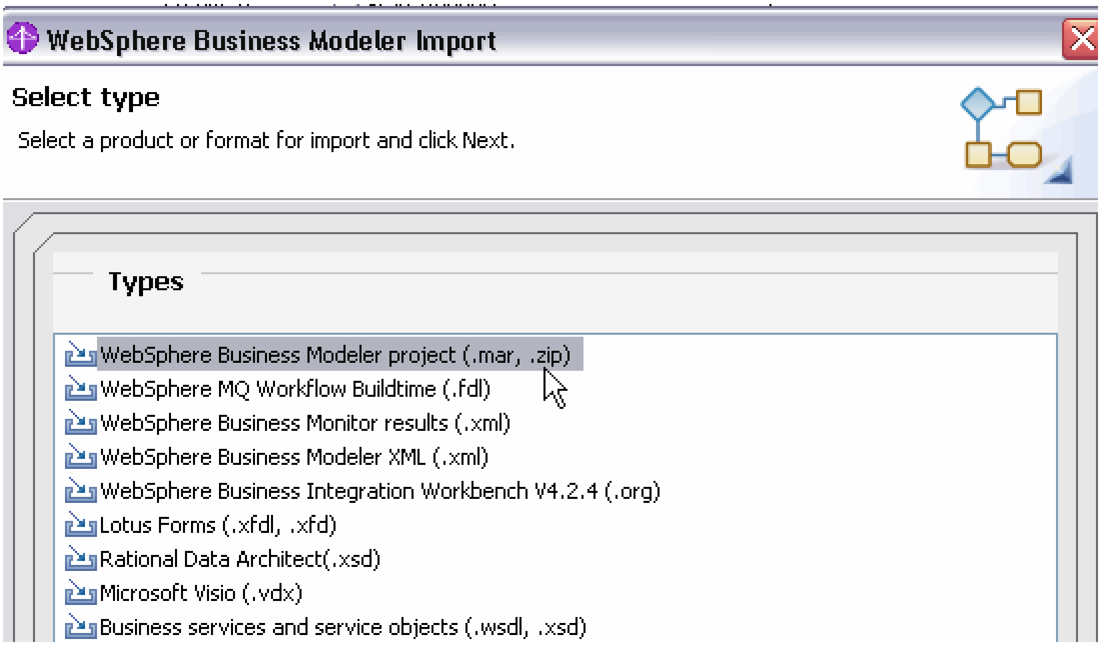
__ 3. Click **Next**.

The **WebSphere Business Modeler Import** window opens.

Note

You can also right-click from the Project tree, and select **Import**.

__ 4. Select **WebSphere Business Modeler Project (.mar, .zip)** as **Type**.



__ 5. Click **Next**.

The **WebSphere Business Modeler Import** screen is displayed.

__ 6. Click the **Browse** button from the **Source directory**.

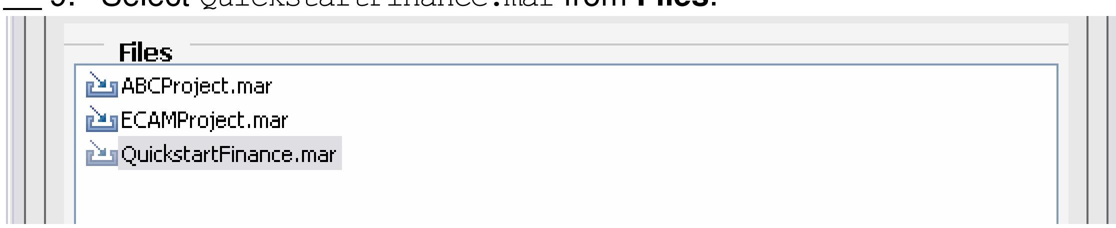
__ 7. Navigate to folder `C:\IBM\WBModeler62\samples`

__ 8. Click **OK**.

Note

You may enter directly or copy and paste the directory path to the Source directory.

__ 9. Select `QuickstartFinance.mar` from **Files**.



__ 10. Click **Finish** to close the **Create a new business modeling project** window.

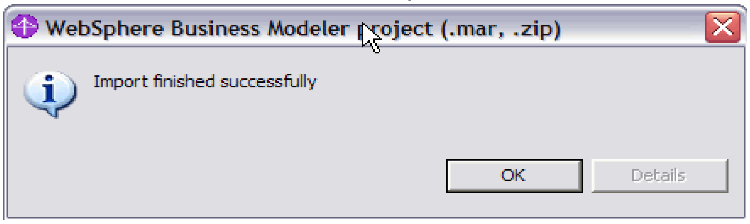
The new QuickStart Tutorial project is created.

Note

If an **Overwrite** window is displayed, click **Yes to all**.

It takes a few minutes for the project elements to be imported.

__ 11. Click **OK** when the import is finished.



Part 6: Examining Project Tree

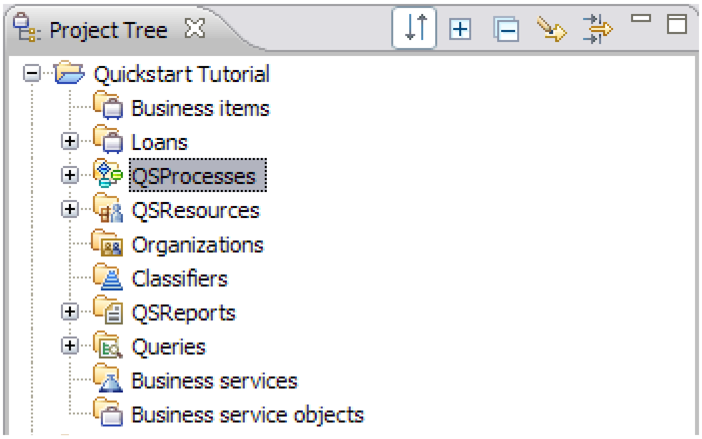
Now the Quickstart Tutorial project has been imported in the workspace. You will examine some of the components within the project.

The toolbar of the Project Tree view contains the following buttons:

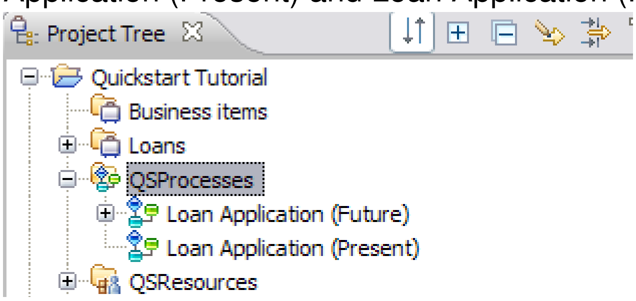
Button	What it does
	Expands all branches of the Project Tree view at or under the branch you have selected.
	Collapses all branches of the Project Tree view.
	Enables you to choose whether the navigation view selection is linked to the active editor. When linking is enabled, each time you change to another editor, the Project Tree view changes to show the element you are editing. Click this button to enable linking, and click it again to disable linking.
	Opens a window that you can use to select the types of items that are displayed in the tree. For example, you can choose to display only the processes and data (without the organizations or resources).
	Minimizes the view.
	Maximizes the view to a single-pane layout. To return to the previous layout, click the **Restore** button.
	Closes the view. To reopen the Project Tree view, click the **Apply 4-pane layout** button on the main toolbar.

In the Project Tree, you can use the expand (+) button to expand the selected folders of the **Quickstart Tutorial**.

__ 1. Select **QSProcesses** from the Project Tree and click the expand (+) button.

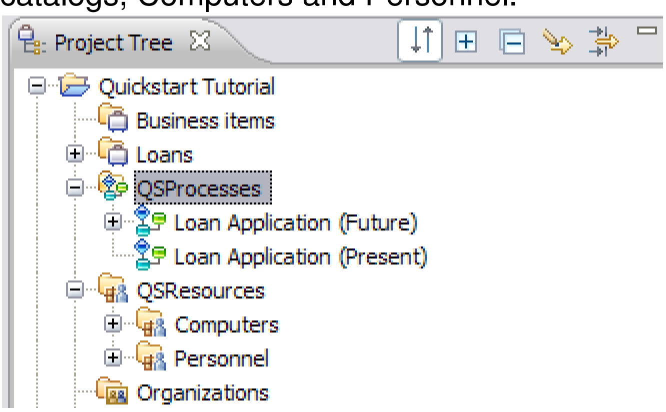


You will see all the entries under the processes folder. There are two processes, Loan Application (Present) and Loan Application (Future), in this folder.

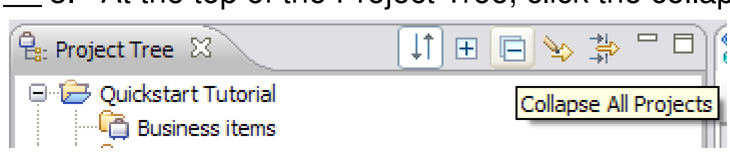


__ 2. Expand the **QSResources** folder in the Project Tree by clicking the expand **(+)** button.

You will see all the entries under the Resources folder. There are two types of resources catalogs, Computers and Personnel.



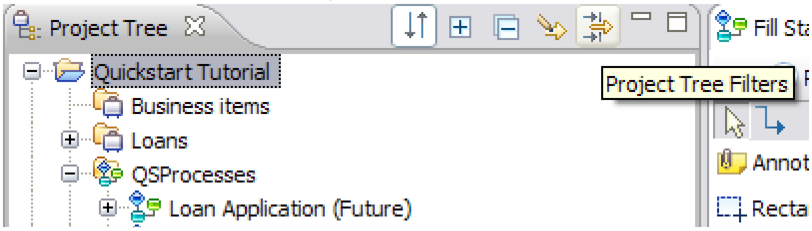
__ 3. At the top of the Project Tree, click the collapse button ( ) to collapse all.



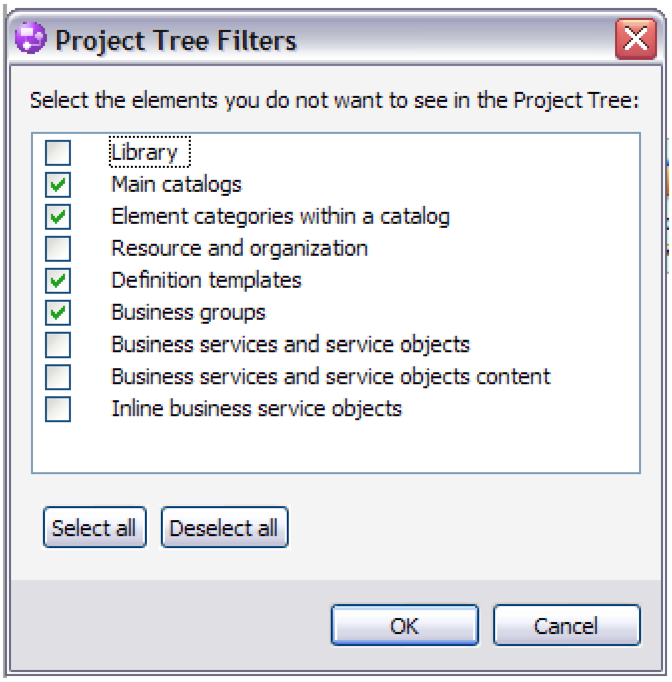
__ 4. Examine the Project Tree filter function.

__ a. Expand the **Quickstart Tutorial** folder in the Project Tree.

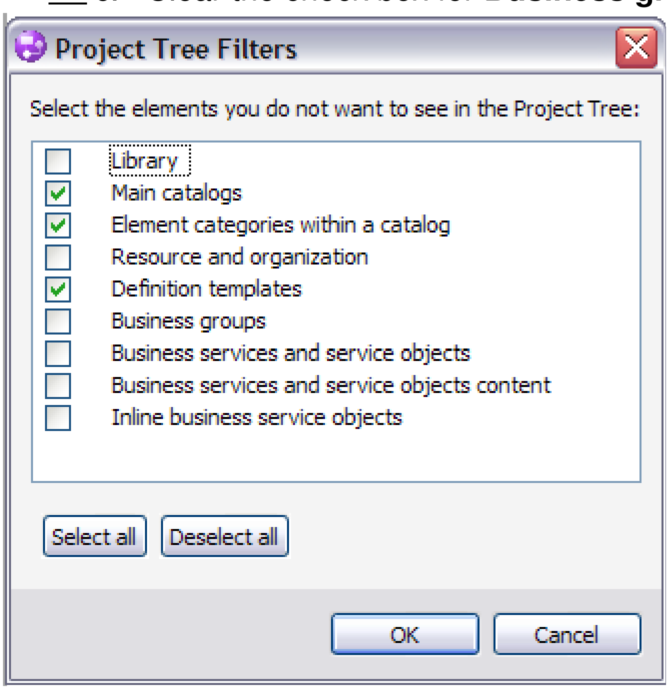
__ b. Click the **Project Tree filters** button.



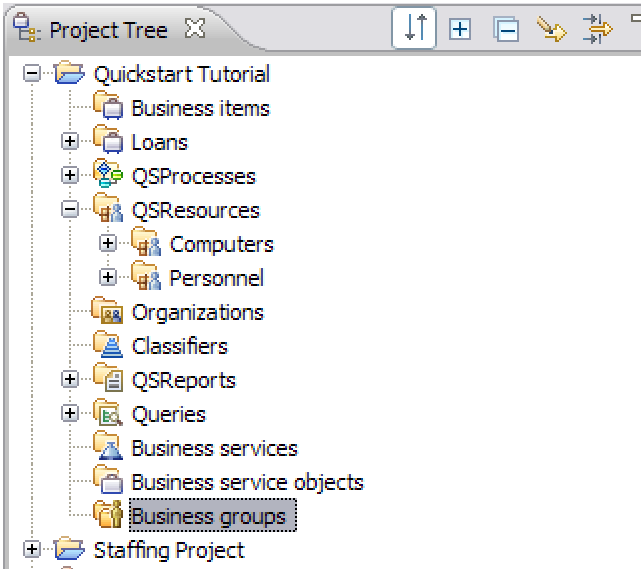
The Project Tree filter window allows you to select the elements that you do not wish to display.



__ c. Clear the check box for **Business groups** and click **OK.**



Now, the Business groups are displayed on the Project Tree.



Note

You can use business groups to collect any elements within a project that you would like to group together. Business groups enable you to create your own groupings rather than using the hierarchy provided in the Project Tree view.

Part 7: Exploring the process editor

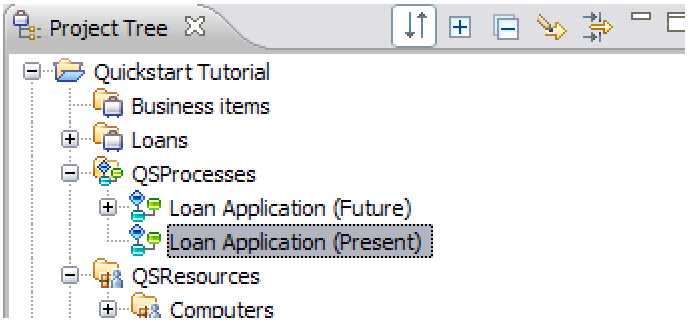
Process editor is the largest pane on the screen, and it is where you do most of your work. You can use the process editor to visually compose your process flow. You can also add existing elements to a process diagram by dragging them from the Project Tree view. The types of elements you can add include:

- Tasks
- Processes
- Repositories
- Services

__ 1. Open up the editor for the **Loan Application (Present)** process under the **QSProcesses** folder.

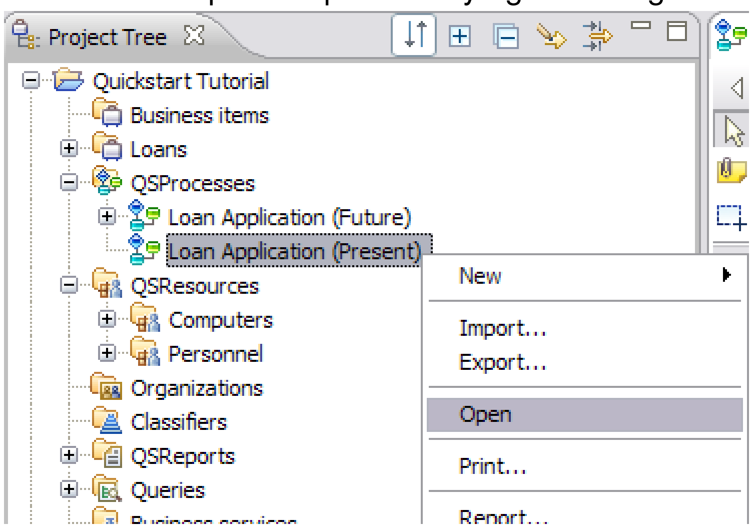
__ a. Expand the **QSProcesses** folder in the Project Tree.

__ b. Open the **Loan Application (Present)** process by double-clicking the process name.

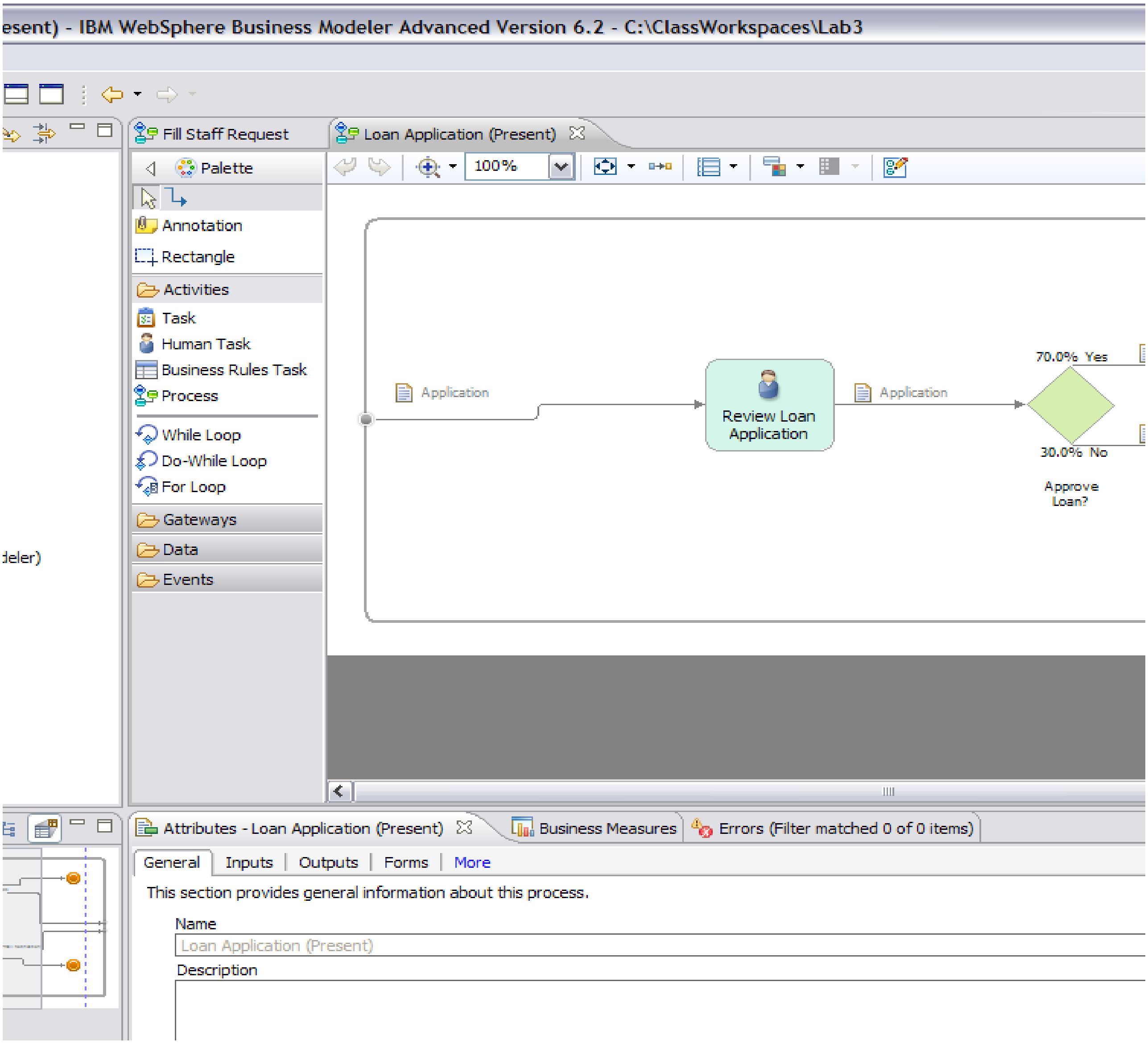


Note

You can also open the process by right-clicking it and selecting **Open**.

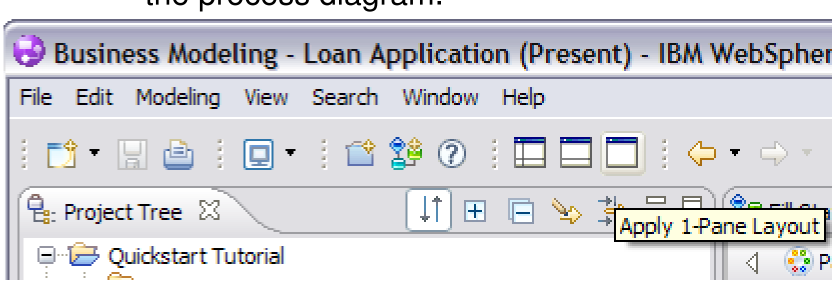


The Loan Application (Present) process will be displayed on the process editor on the right, and both the Outline view and the Attribute view appear.

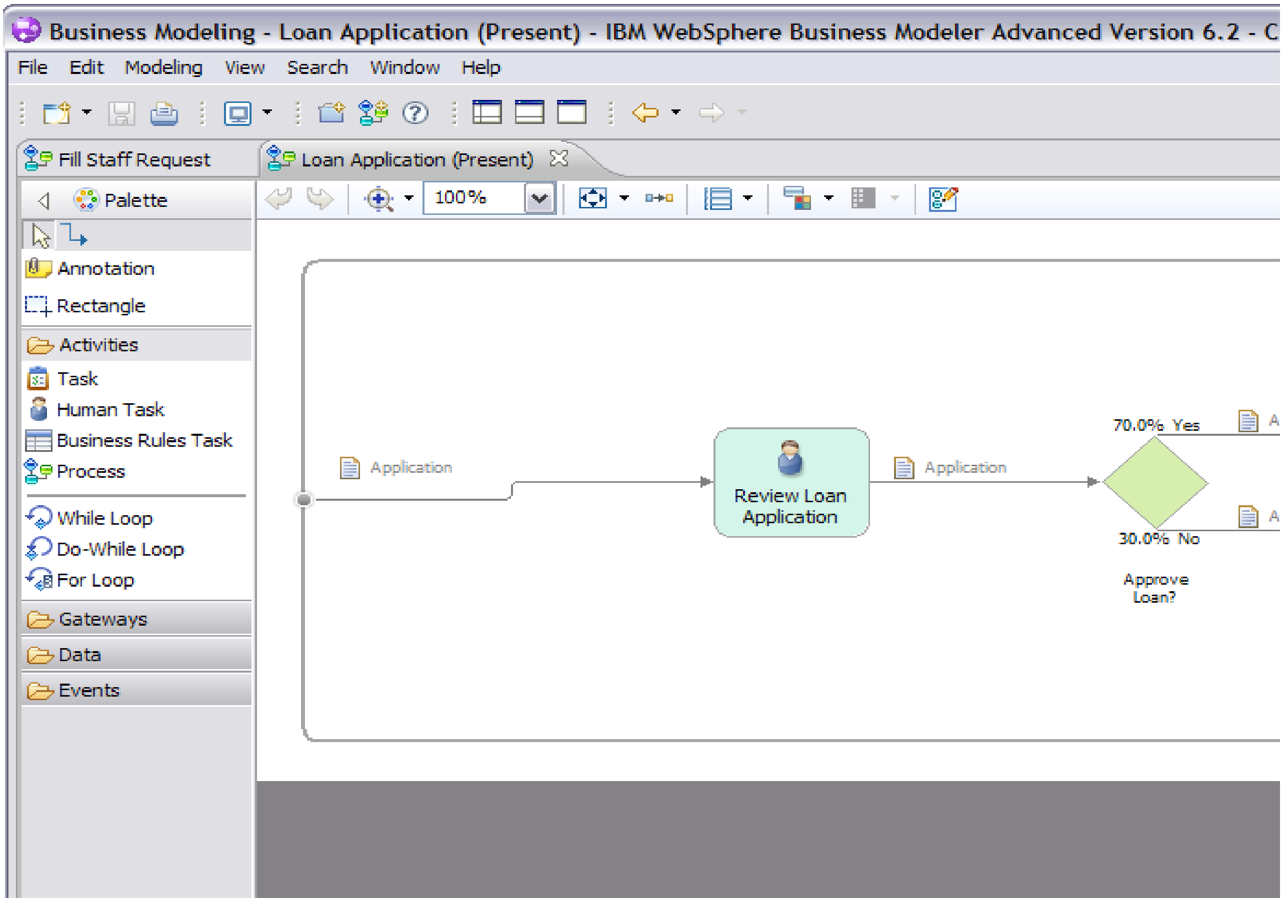


__ 2. Switch to 1-pane layout.

__ a. Click the **Apply 1-pane layout** button from the toolbar so that you can focus on the process diagram.

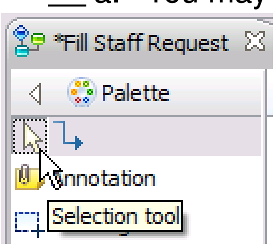


__ b. Now, only the process editor displays on WebSphere Business Modeler.

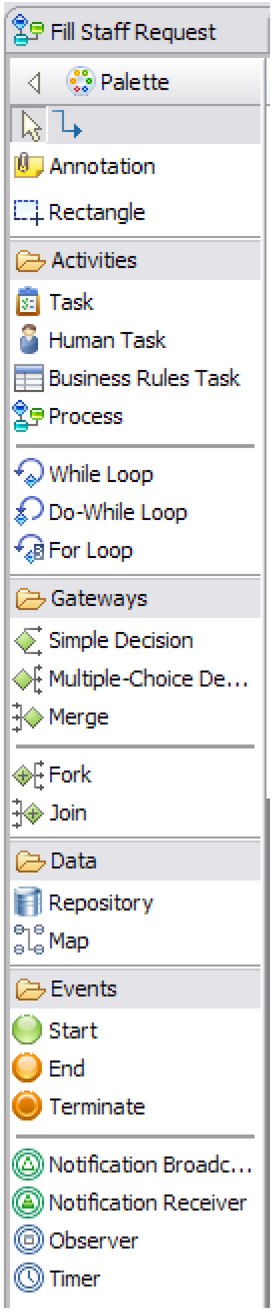


__ 3. Now, you will learn how to use some editor features of WebSphere Business Modeler.

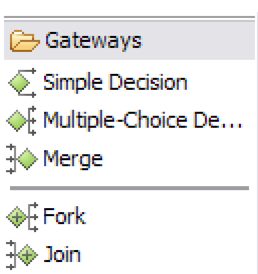
__ a. You may use the Arrow icon to select an item or a group of items.



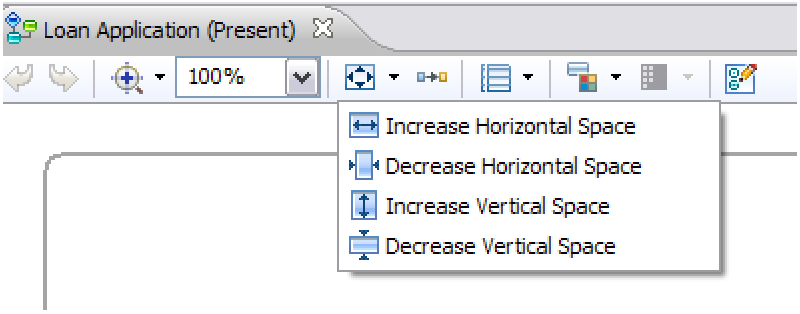
__ b. You may drag any of the elements from the palette onto the diagram.



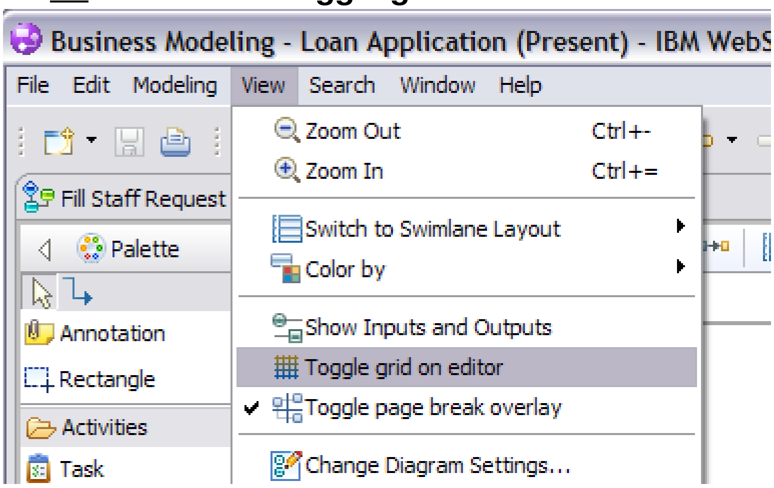
__ c. Click the **Gateways** drawer on the palette to display the selection for additional Gateway elements.



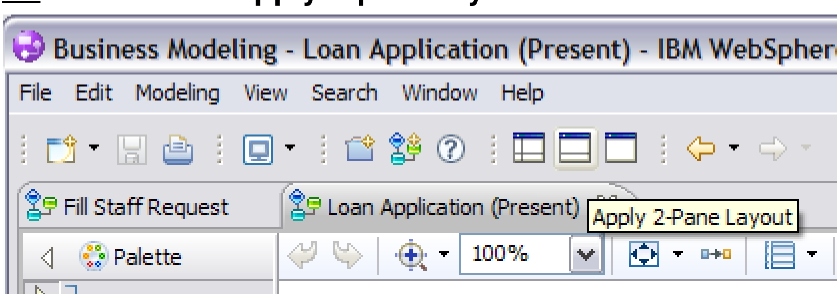
__ d. Click any of the following icons from the resize menu to increase or decrease the spaces in the diagram.



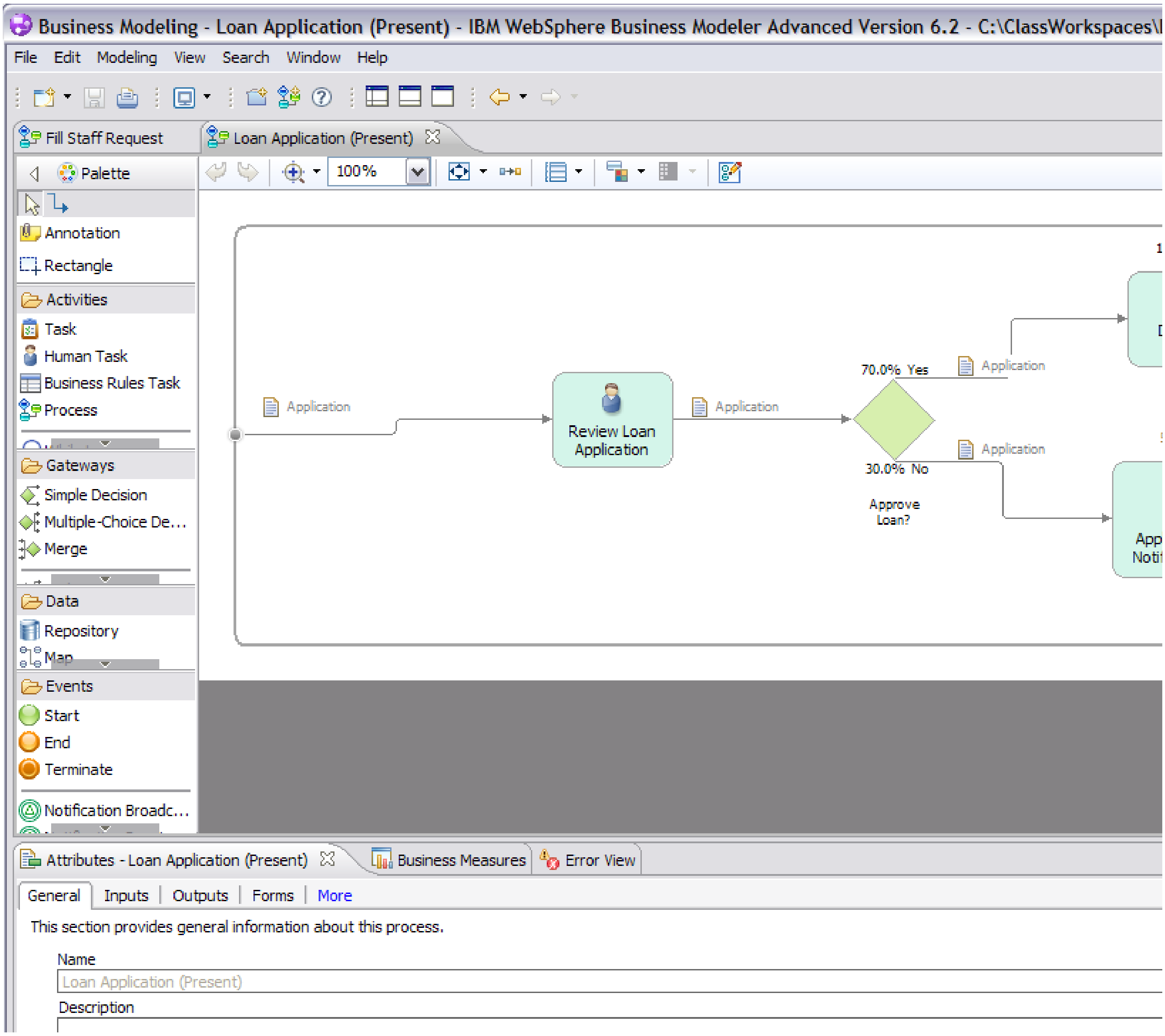
__ e. Click the **Toggle grid on editor** to show or hide gridlines.



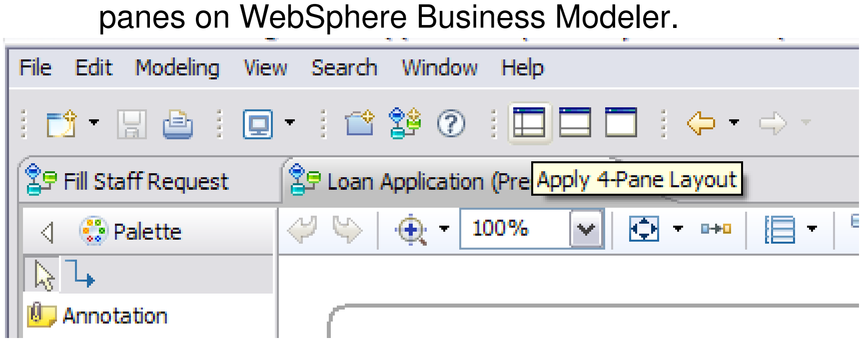
__ 4. Click the **Apply 2-pane layout** button from the toolbar.



Now, both the process editor and the attributes view are displayed on WebSphere Business Modeler.



__ 5. Click the **Apply 4-pane layout** button from the toolbar to resume displaying four panes on WebSphere Business Modeler.



Part 8: Exploring the Outline view

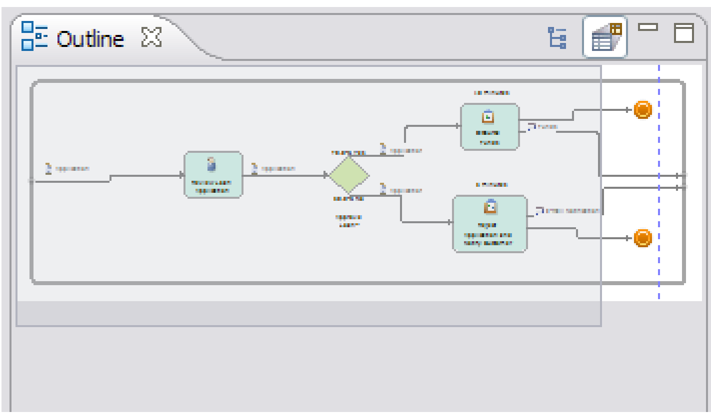
The Outline view on the bottom left hand side of the screen displays a thumbnail of the diagram that is currently open in the process editor. You can drag the highlighted area in

the Outline view to show a different area of the diagram in the process editor. This is a convenient function for viewing specific sections of large, complex diagrams. If you want to go to a particular element in a diagram, a quick and precise way is to use the Outline view.

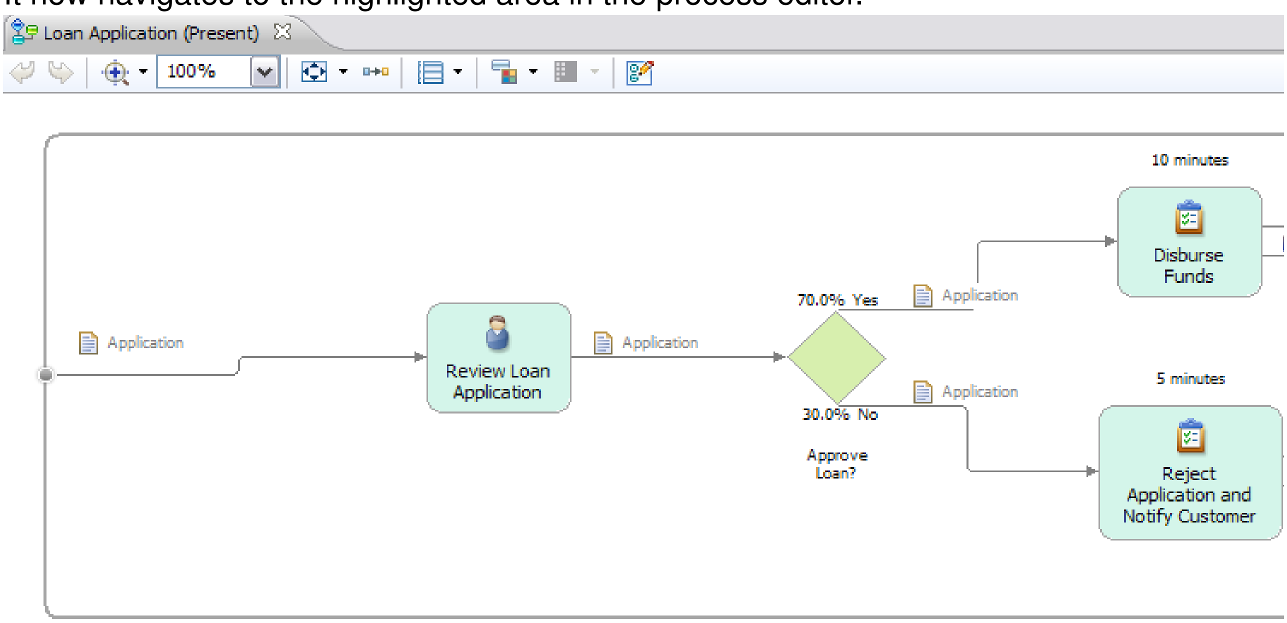
The toolbar of the Outline view contains the following buttons:

Button	What it does
	Displays the process in a tree structure
	Displays the entire process diagram in a small thumbnail window. Drag the highlight box to navigate to the highlighted area in the larger diagram.
–	Minimizes the view.
	Maximizes the view to a single-pane layout. To return to the previous layout, click the **Restore** button.
×	Closes the view. To reopen the Outline view, click the **Apply 4-pane layout** button on the main toolbar.

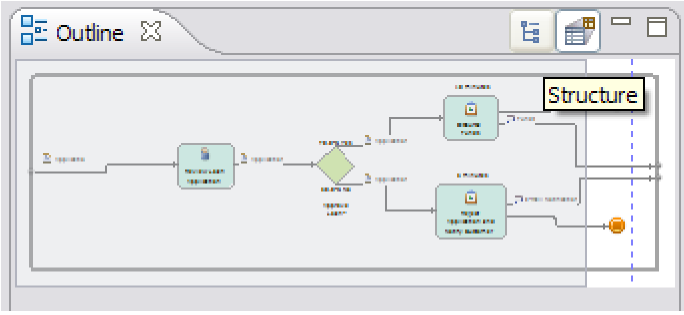
__ 1. Use your mouse to drag the highlighted area to focus on the four elements in the **Outline** view.



It now navigates to the highlighted area in the process editor.

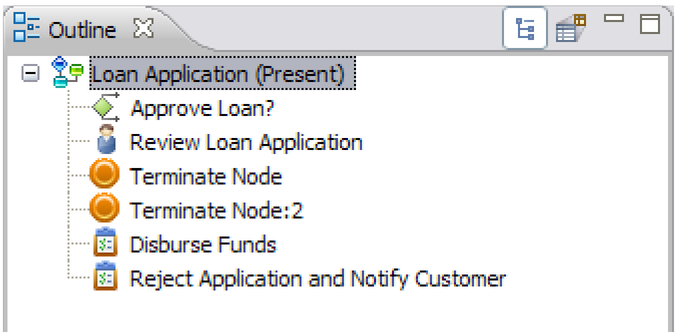


__ 2. Click the **Structure** button on the Outline view.



__ 3. Expand the **Loan Application (Present)** process.

You can click the element on the list and it will take you to the element in the diagram.



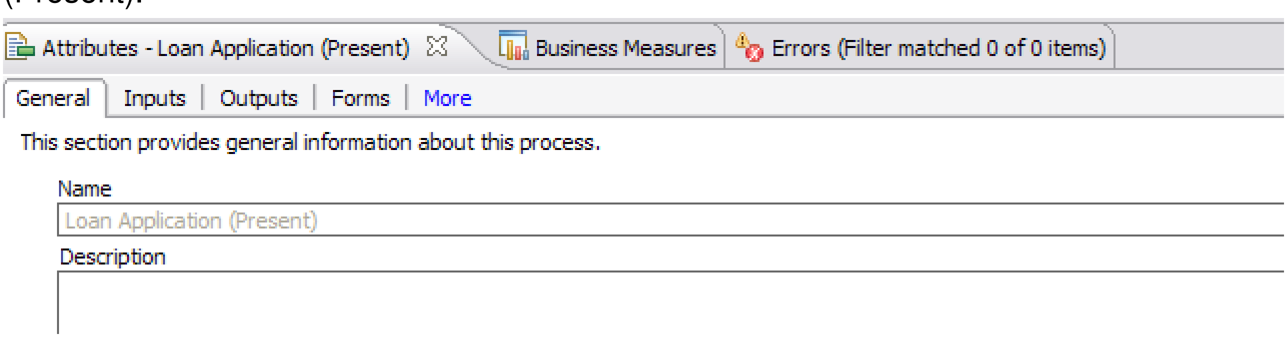
Note

The tree view in the Outline view is listed in order first by element type and then by element name.

Part 9: Exploring the attributes view

The Attributes view, which is located under the process editor, shows the details of any element you select in the diagram. You can click each of the tabs to see more information about the element.

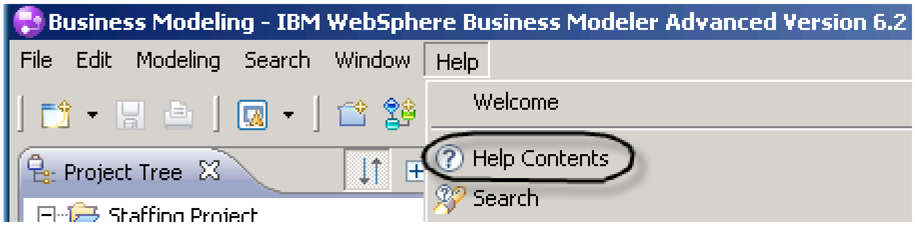
The following image shows part of the Attributes view for the process of Loan Application (Present).



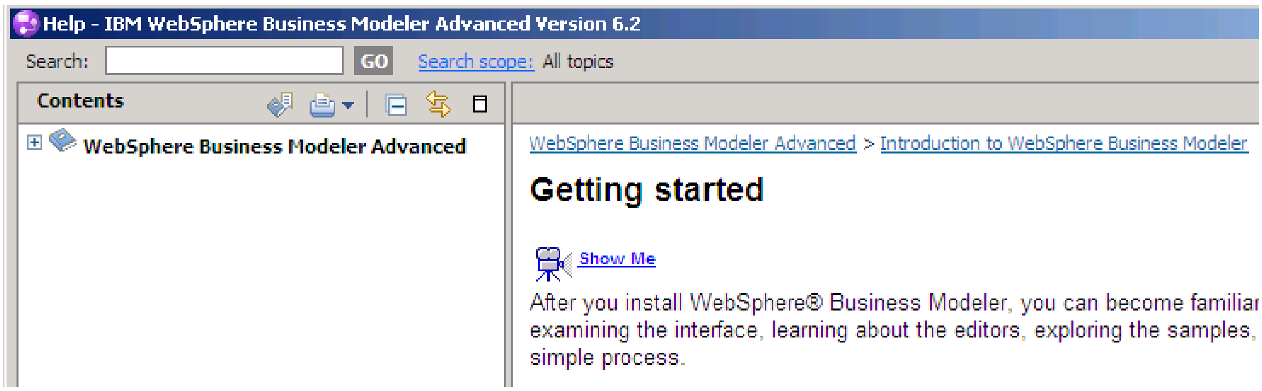
You will have a chance to work with this view in the later exercises.

Part 10: Launching the Modeler help

__ 1. To launch Modeler help, from the menu bar, click **Help > Help Contents**.



A **Help - IBM WebSphere Business Modeler Advanced Version 6.2** window will open.



The Modeler help is also known as the information center, where you can find all of the information that you need to install, maintain, and use WebSphere Business Modeler.

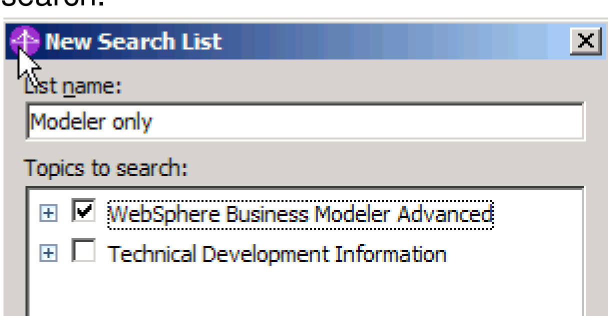
A search function is available for you to perform a search on any information about the Modeler and the technical development information. You can limit the search scope to only WebSphere Business Modeler.

__ 2. Click the **Search scope** link on the top of the window.

__ 3. Click the **New** button.

__ 4. Enter **`Modeler only`** as the List name.

__ 5. Select the **WebSphere Business Modeler Advanced** check box for the topics to search.



__ 6. Click **OK.**

__ 7. Click **OK** to return to help.

The **WebSphere Business Modeler Help** will search for Modeler only.

Part 11: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

Hint

You can search help using the key words from the question.

__ 1. How does WebSphere Business Modeler support of service-oriented architecture?

____

__ 2. Where do you find out the new features and enhancements for the current release?

____

__ 3. Exit WebSphere Business Modeler.

Part 12: Review activity: Flashcards

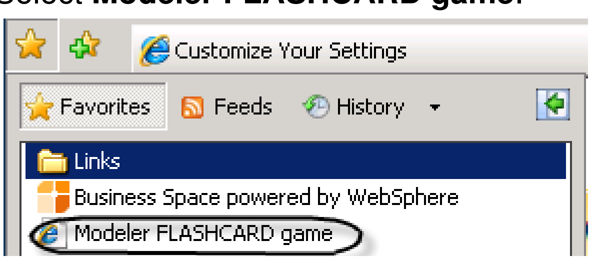
Introduction

The flashcard applet is designed to help you learn and understand new vocabulary and concepts that you have learned in this unit. Each card contains a new term you have learned in class. The “back” of the card contains the definition of the term. It is your task to review the new terms and their definitions after each unit.

__ 1. Launch a Web browser and, in the toolbar, Click **Favorites**.

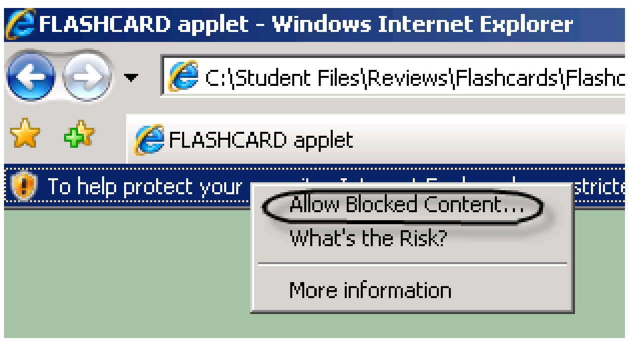
Your Web browser will open and launch the flashcard Java applet.

__ 2. Select **Modeler FLASHCARD game**.



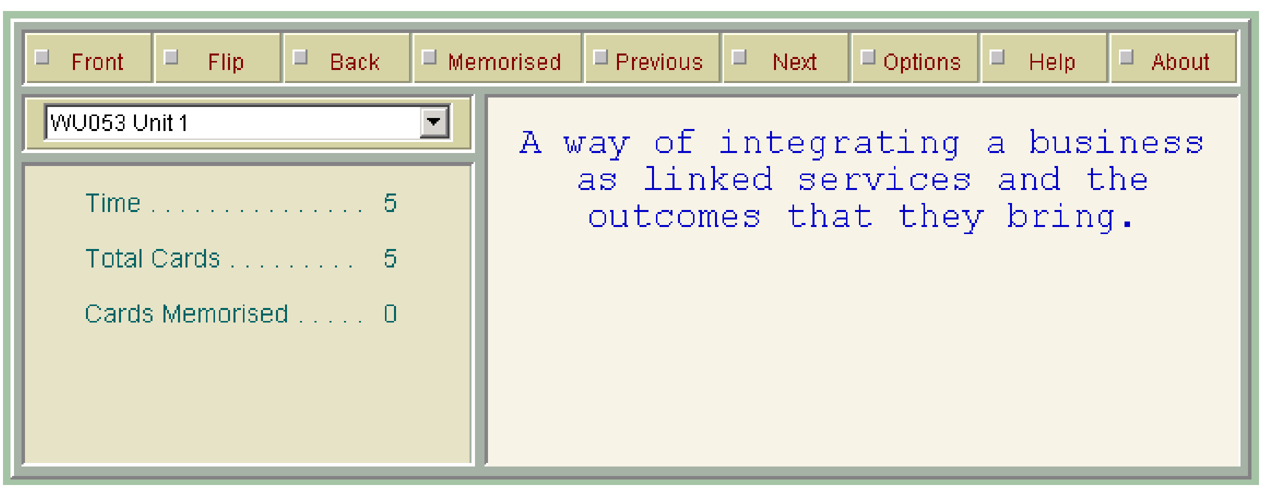
__ 3. Click **Close** if the Information bar window displays**.**

__ 4. Right-click and select **Allow Blocked Content** from the pop-up.



__ 5. Click **Yes** to run Active content.

__ 6. Select the appropriate unit from the drop-down menu to see the set of flashcards for that unit.



__ 7. If you see a term definition, try to figure out what the term is. Likewise, if you see a term, think about what the definition is.

__ 8. To check your answer, click **Flip** to see the other side of the flashcard.

__ 9. Click **Front** to see the front side of the flashcard.

__ 10. Click **Back** to see the back side of the flashcard.

__ 11. Click **Next** and **Previous** to navigate through all the terms.

__ 12. When you have memorized a term and its definition, click **Memorized**. This will cause the term not to show up anymore and makes your **Cards Memorized** counter increase by one. Try running through the flashcards a few times before determining whether a term is memorized or not.

END OF EXERCISE

Exercise 3. Adding definitions and structures

Estimated time

01:00

What this exercise is about

This exercise covers adding definitions and structures.

What you should be able to do

At the end of the exercise, you should be able to:

- Add more elements to the process diagram
- Associate business items and connecting process elements
- Add a repository
- Convert local elements to global elements

Exercise instructions

Preface

In the previous exercise, you created a simple process model called Fill Staff Request. In this exercise, you will expand the process to include more tasks, processes, and information.

Business scenario:

When a project manager at Big Apple receives a service request from a customer, the following procedure takes place:

1. The project manager and the project executive review the staff request and log the staff request for tracking purposes.
2. The resource manager identifies the qualified resources (consultants or technicians) based on skills and experience.
3. The project manager then checks the availability of the resources (consultants or technicians).
4. If resources are available, the project manager creates a work assignment and assigns the staff to the staff request.
5. If resources are not available, the project manager contacts the business partner to fill the request.
6. If the business partner is not able to fill the request, the project manager contacts the customer to determine whether they can wait for resources to become available.
7. If the customer can wait, the project manager schedules the work for a future assignment.
8. If customer cannot wait, the project manager contacts the business partner again to see if resources are available yet to fill the request.
9. If there are no resources available from business partner, the staff request is escalated to the project executive to resolve the issue.
10. When resources become available, the project manager assistant sends the assignment notification to the staff.

In this exercise, you will be developing a model that represents this process.

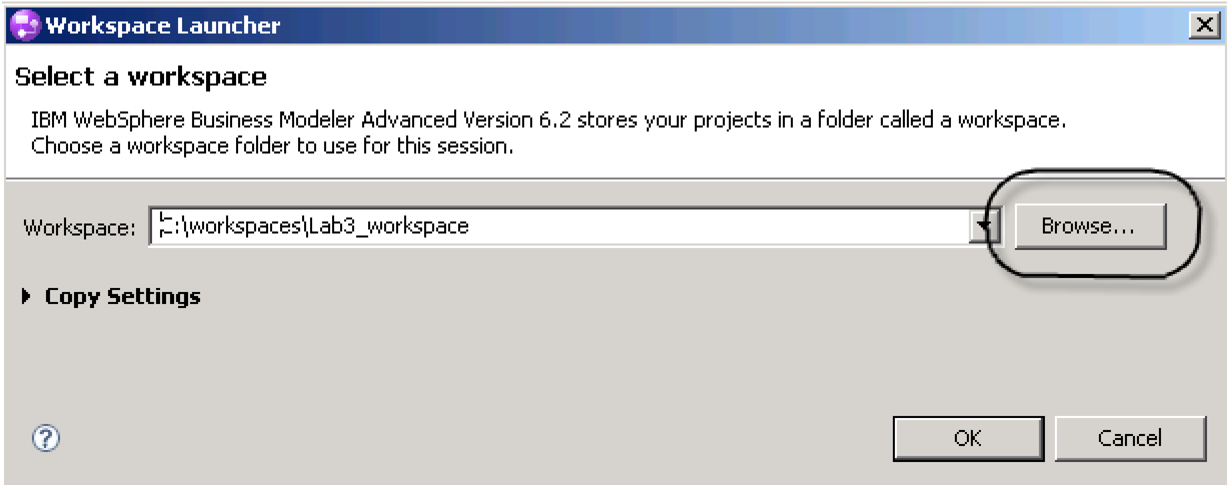
Part 1: Switching to another workspace

__ 1. From the menu bar, select **File > Switch Workspace > Other**.

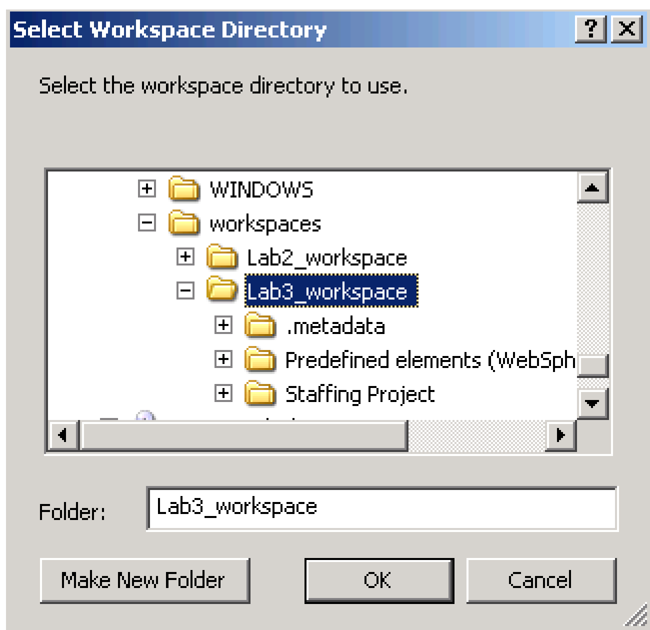
__ 2. Click **Browse** to the following workspace:
`C:\workspaces\Lab3_workspace`

This workspace has already been created for you. Browsing to the workspace instead of typing the path reduces the likelihood of accidentally creating a new workspace because of a typo.

__ a. In the Workspace Launcher window, click **Browse**.



__ b. Navigate to `C:\workspaces`, select **Lab3_workspace**, and click **OK** to use this workspace.



__ c. Click **OK** again to launch the workspace.

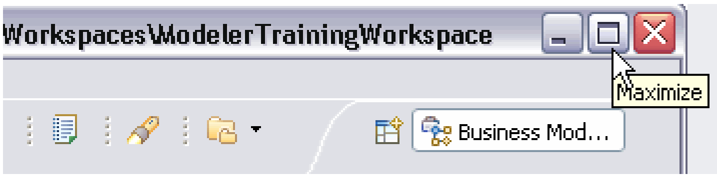
In this workspace, note that the Staffing Project in the Project Tree has been created for you based on the steps in the previous lab exercise.

__ 3. Open the **Fill Staff Request** process.

__ a. In the Project Tree, expand **Staffing Project > Process Catalog** and double-click **Fill Staff Request**.

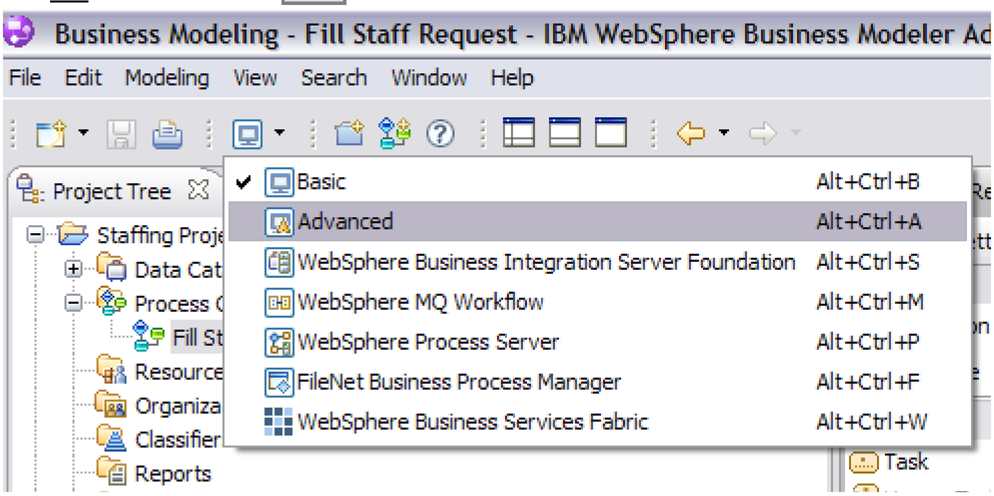
__ 4. Switch to 2-pane layout by clicking the **Apply 2-pane layout** button from the toolbar so that you have more space to work with in the diagram.

__ 5. If your window is not already maximized, click the Maximize button to maximize the WebSphere Business Modeler window, and you will find it much easier to navigate, view, and work with your diagram.



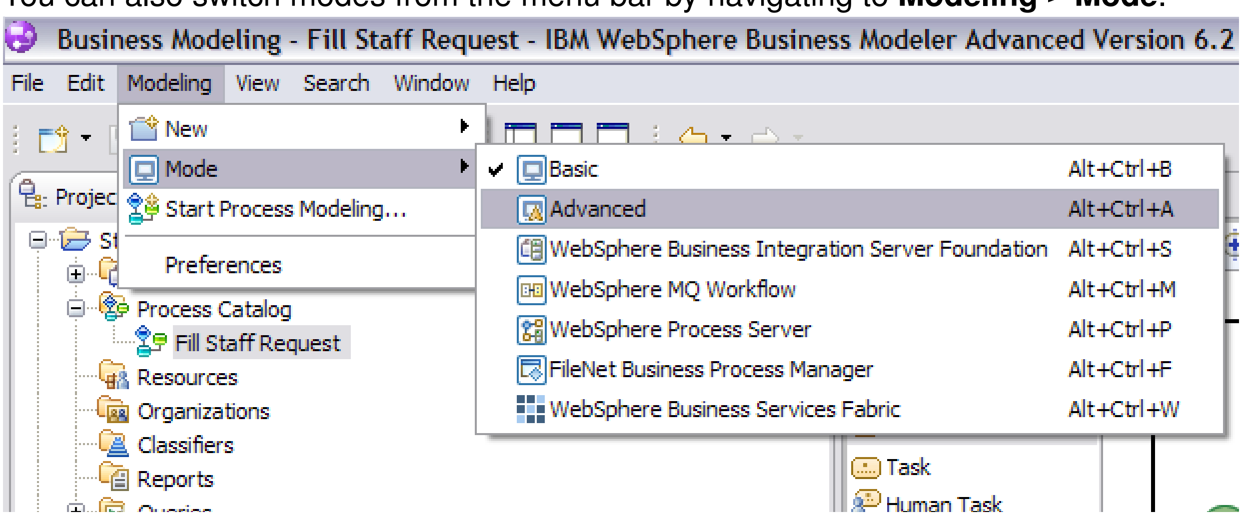
__ 6. Switch to the Advanced modeling mode.

__ a. Click the  button in the toolbar and select **Advanced**.

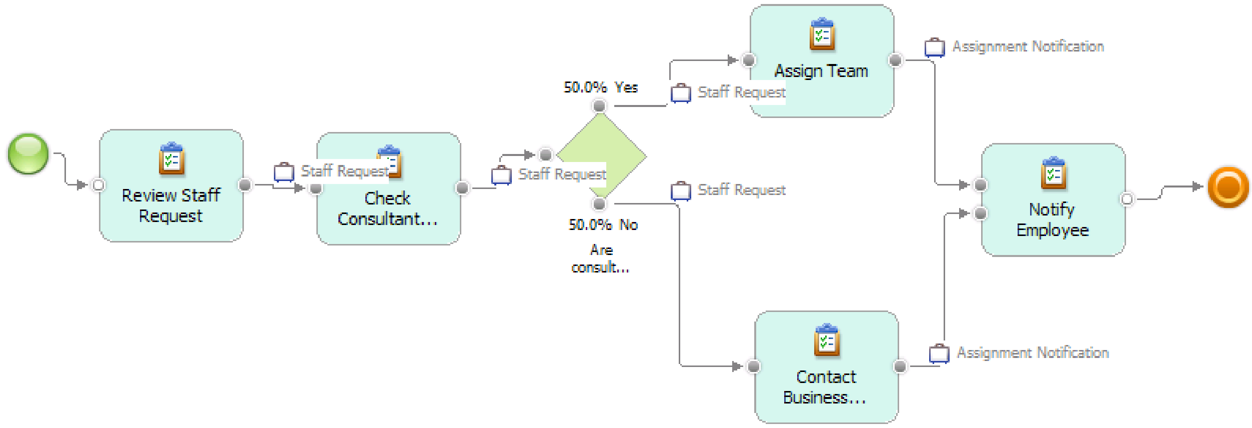


Note

You can also switch modes from the menu bar by navigating to **Modeling** > **Mode**.



The process diagram displays as follows:



Part 2: Adding more elements to the process diagram

You will build on your process diagram based on the business scenario by adding more elements to the process.

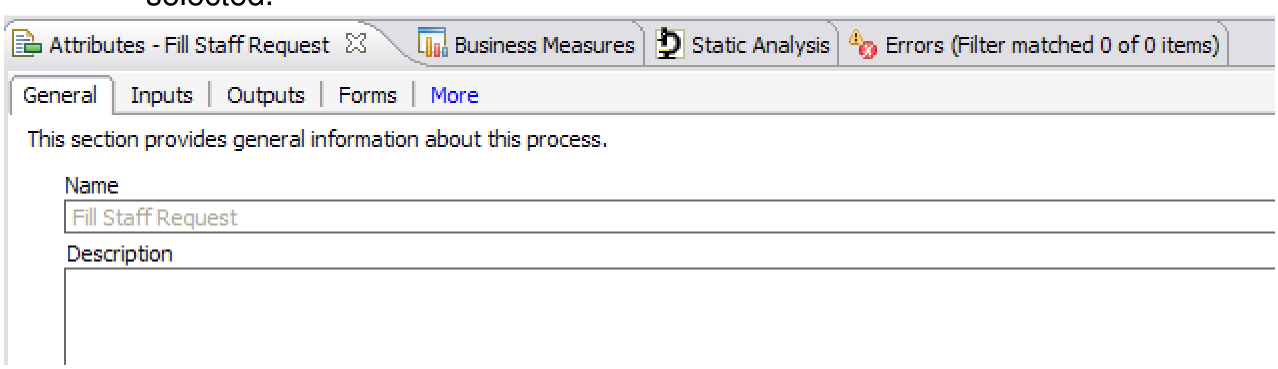
__ 1. Organize the diagram by right-clicking the white area in the diagram and selecting **Auto-Layout Left to Right**.

__ 2. In the **Fill Staff Request** process diagram, remove the **start** node from the diagram by selecting it and pressing the Delete key on your keyboard.

__ 3. Add a description to the **Review Staff Request** task.

__ a. In the diagram, select the **Review Staff Request** task.

__ b. In the **Attributes** pane at the bottom of the window, verify that the **General** tab is selected.



__ c. Enter the following text in the description field:

`Review the staff request and identify the qualified resources (consultants or technician) based on skills and experience.`

__ 4. Verify that the description fields for the other tasks have been entered already.

With the updated business scenario, there will be new tasks and elements being added to the process diagram.

In this process model, there will be incoming data (the service request) to start the process; therefore, it is not necessary to have a start node in the diagram. There will be a terminate node at the end of the process depending on the output paths.

__ 5. Create a task called **Contact Customer**.

__ a. Right-click inside the diagram and select **New > Local Task**.

__ b. Rename this new task to `Contact Customer`

The **Attributes** view at the bottom now focuses on your newly created task.

Note

If the **Attributes** view is not displayed, verify that you are using either a 2-pane or 4-pane layout.

Note

To change the name of the task, simply select it, click the name, and edit the text.

You can create multiple tasks by left-clicking while holding down the Shift key.

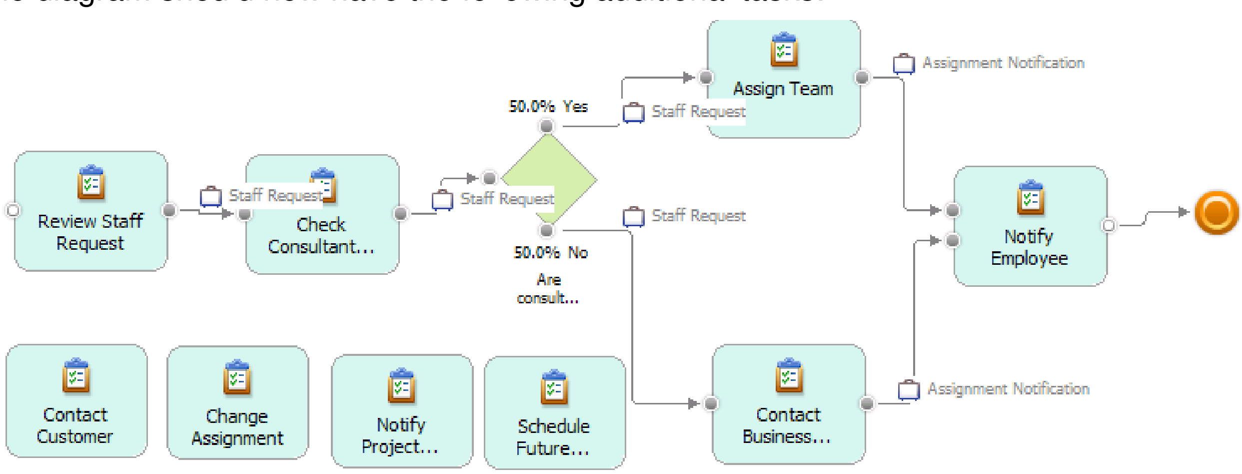
__ 6. Add the following three tasks to the diagram (hold down the **Shift** key to add multiple tasks):

`Change Assignment`

`Schedule Future Assignment`

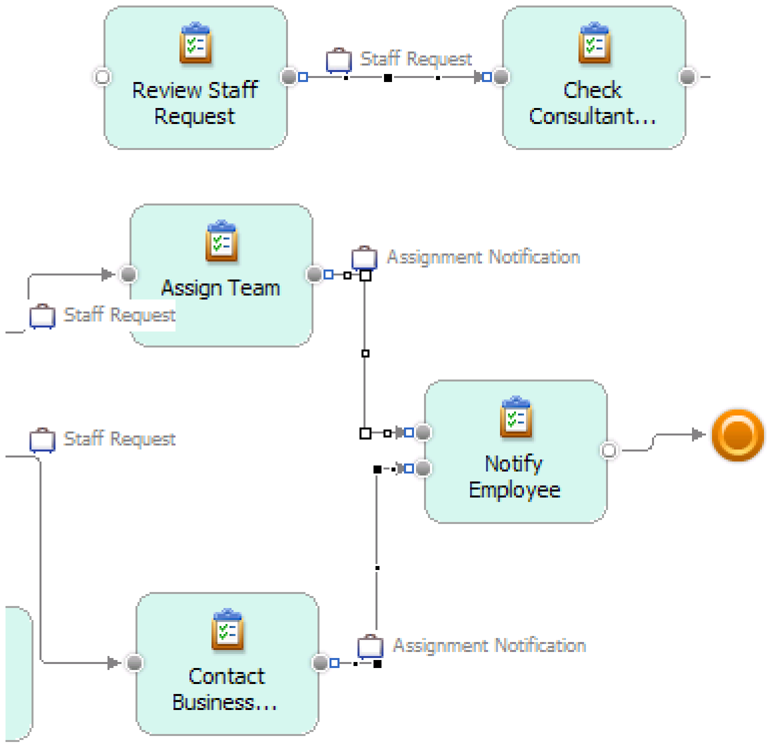
`Notify Project Executive`

The diagram should now have the following additional tasks:



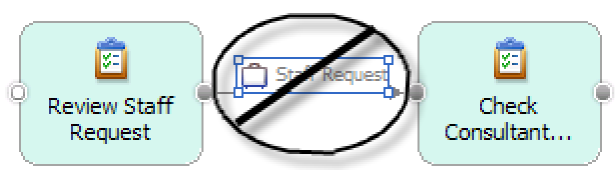
__ 7. Save your changes (Ctrl+S).

__ 8. While holding down the Ctrl key, use the mouse to single-click each of the following three connections on the diagram until they are selected.

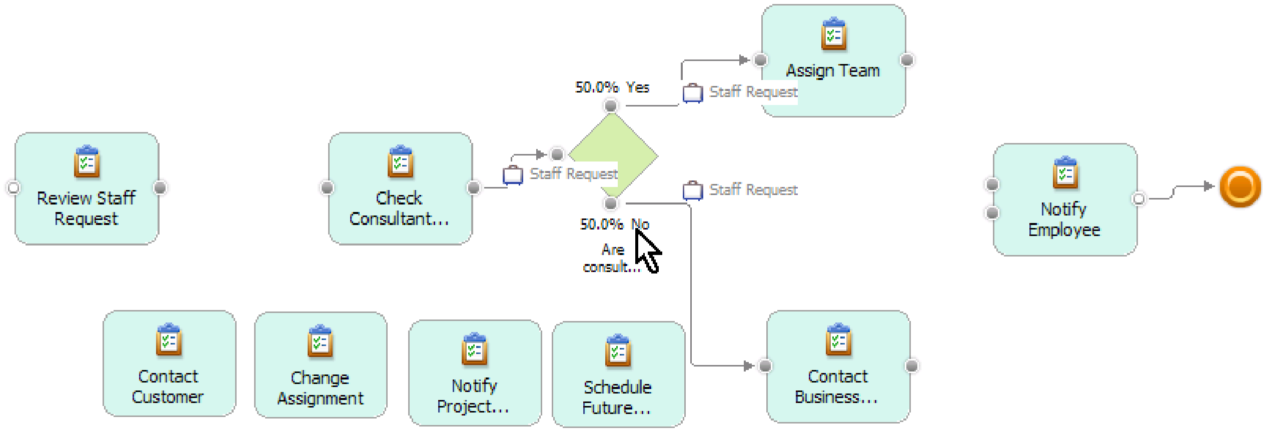


Note

You should select the connection, not the business item or data.

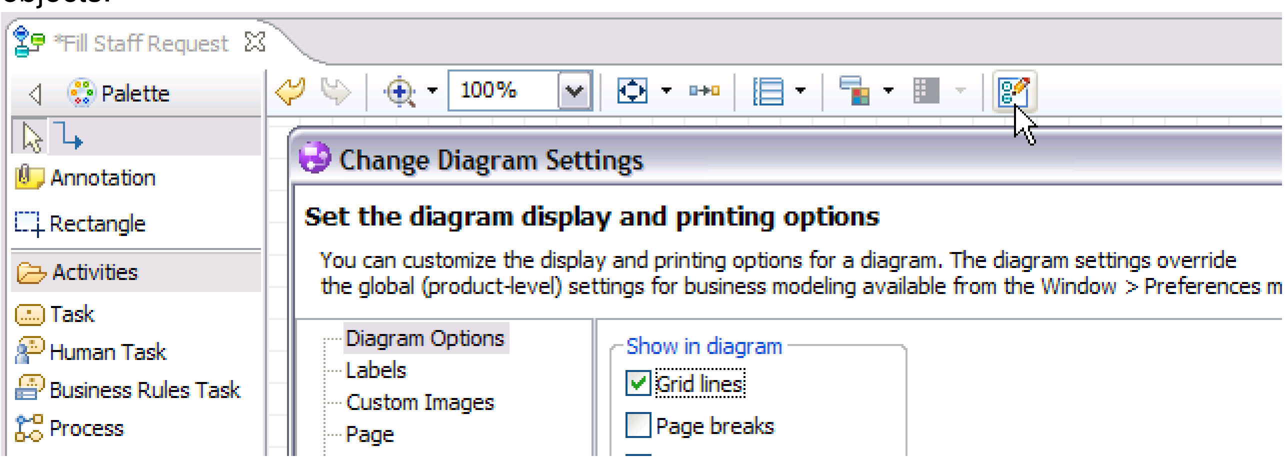


__ 9. Press the **Delete** key to delete the selected connections.



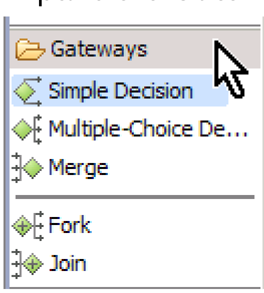
Note

You can click the **Change Diagram Settings** button on the process editor toolbar and check the box next to **Grid lines** to show gridlines on the editor to help you align the objects.



__ 10. Add two **Simple decision** objects to the diagram.

__ a. Expand the **Gateways** drawer in the palette.



__ a. Select **Simple Decision** and drag it to the diagram.

__ b. Place two **Simple Decision** objects in the diagram.

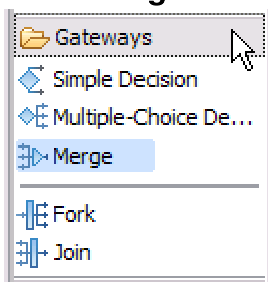
__ a. Label the first decision as `BP Resource Available?`

__ b. Label the second decision as `Can Customer Wait?`

Now, you should have two additional **decision** objects on your diagram.

__ 11. Add two **merge** objects to the diagram.

__ a. Select **Merge** from the **Gateways** drawer in the palette.



__ b. Place the **Merge** in the diagram.

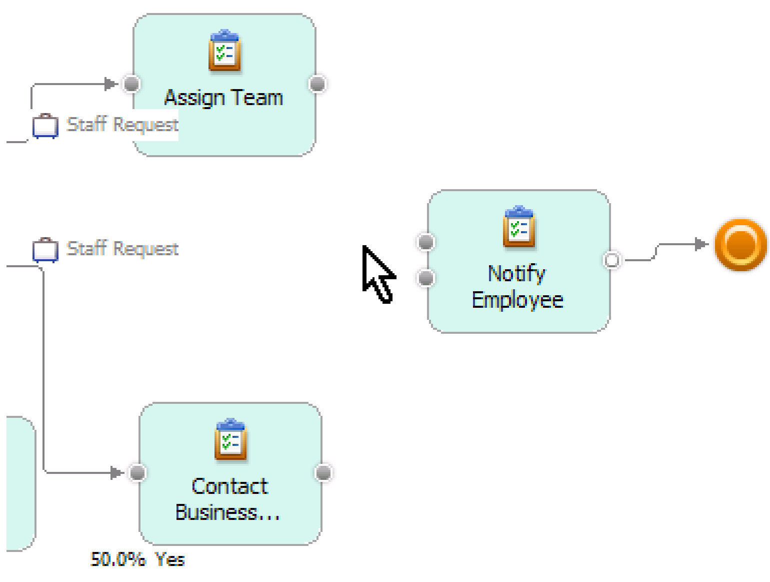
__ c. Right-click the **merge** object and select **Copy**.

__ d. Right-click again to select **Paste**.

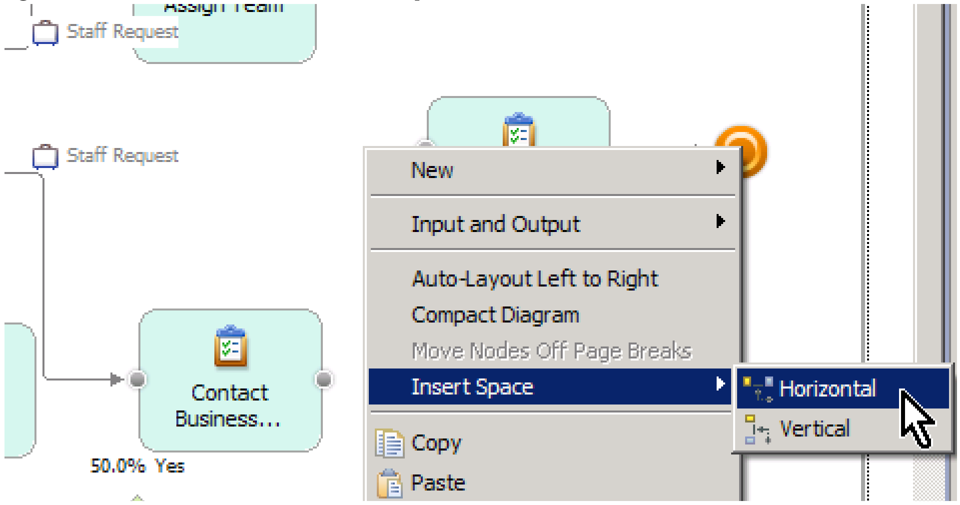
Now, you should have two merge objects in your diagram.

__ 12. You will need to rearrange all the objects in the diagram in order to leave space for moving objects around.

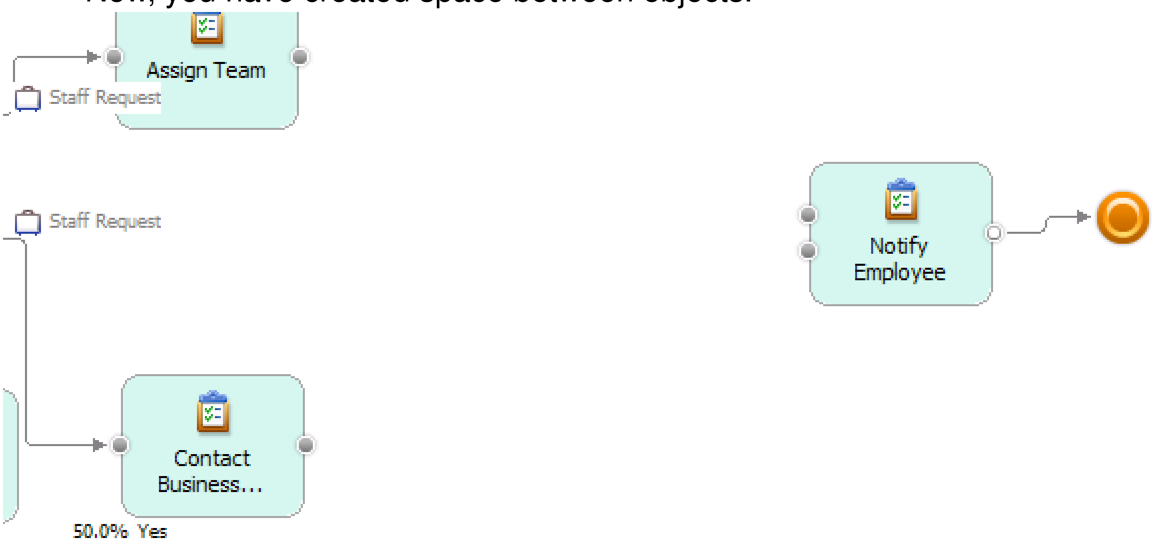
__ a. Move your mouse cursor to left of the **Notify Employee** task.



__ b. Right-click and select **Insert Space > Horizontal**.

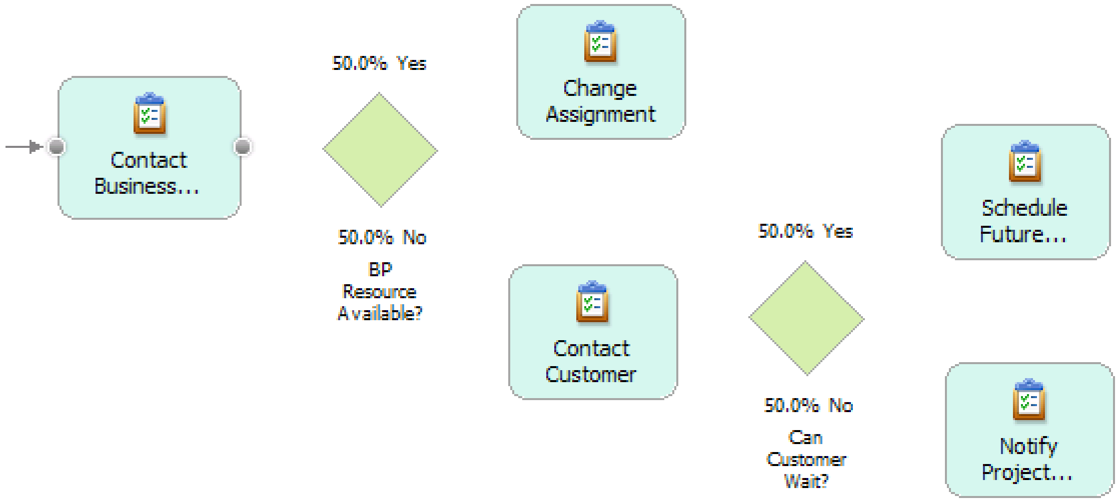


Now, you have created space between objects.

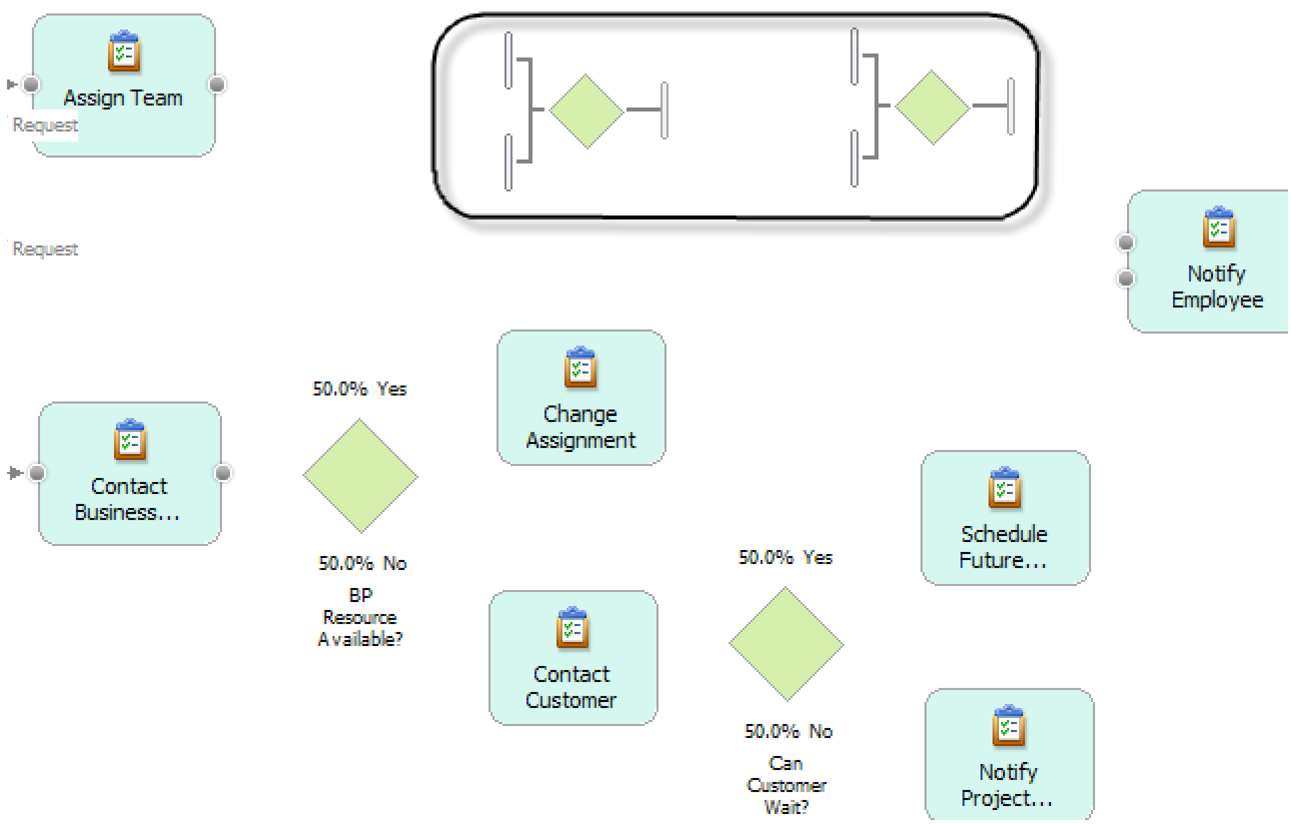


__ c. Place the **BP Resource Available?** decision next to **Contact Business Partner**, and place the **Change Assignment**, **Contact Customer**, **Can**

Customer Wait?, **Schedule Future Assignment, and Notify Project Executive** in the diagram as follows:



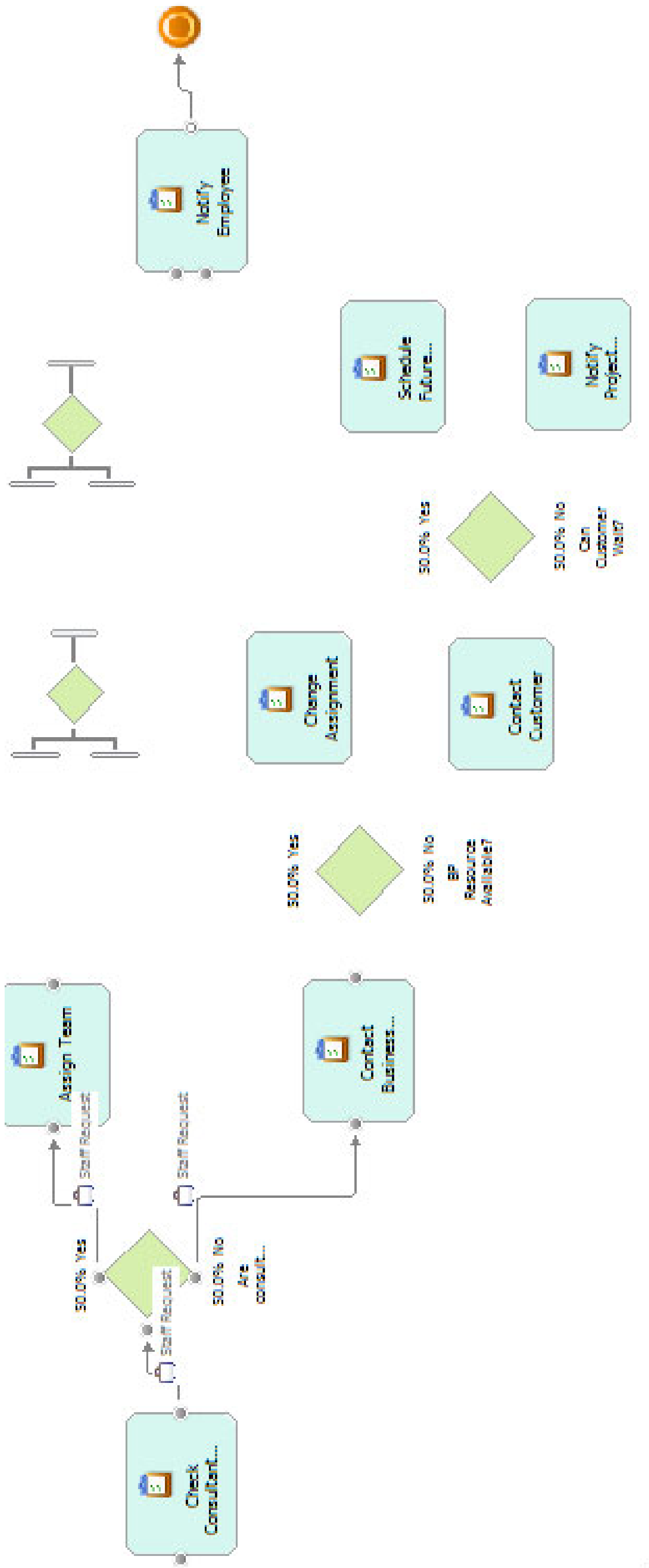
__ d. Finally, place the two **merges** in the diagram as follows:



Note

Eliminate the extra space on your process diagram: right-click and select **Compact Diagram** from the process editor.

__ 13. Move and rearrange all the new objects that you just created as follows:

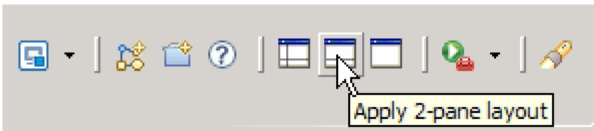


__ 14. Save the process (Ctrl+S).

Part 3: Associating business item and connecting process elements

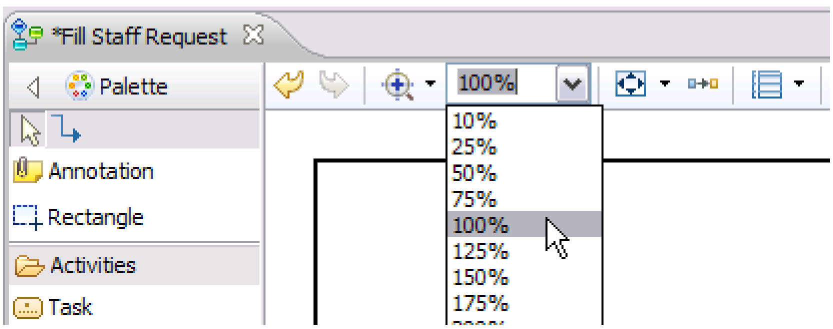
You will now add some more technical details to the process model.

__ 1. Click the **Apply 2-pane layout** button from the toolbar so that you can work with the diagram in the process editor and attributes pane.

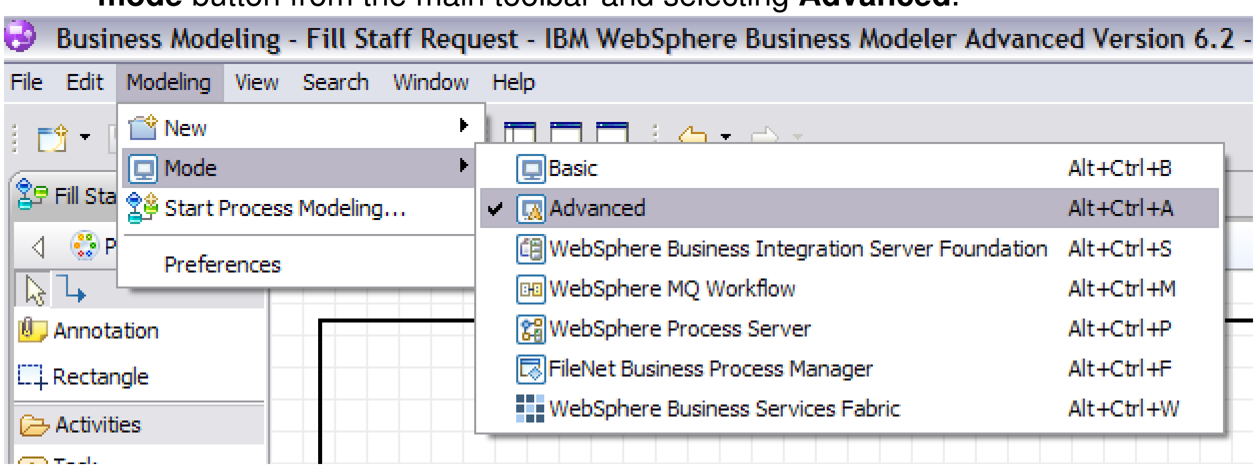


Note

You can zoom in and out of the process diagram by selecting a value from the drop-down menu of the toolbar.



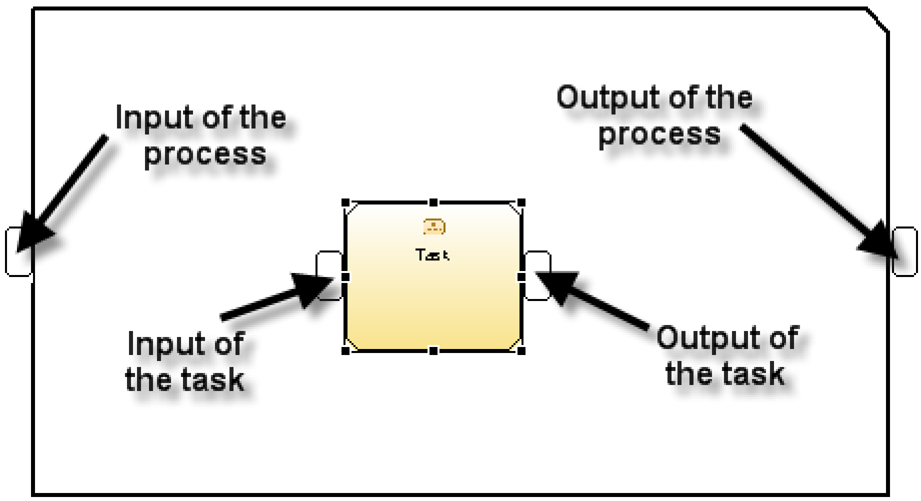
__ 2. Make sure that the modeling mode is set to **Advanced** by clicking the **Select a mode** button from the main toolbar and selecting **Advanced**.



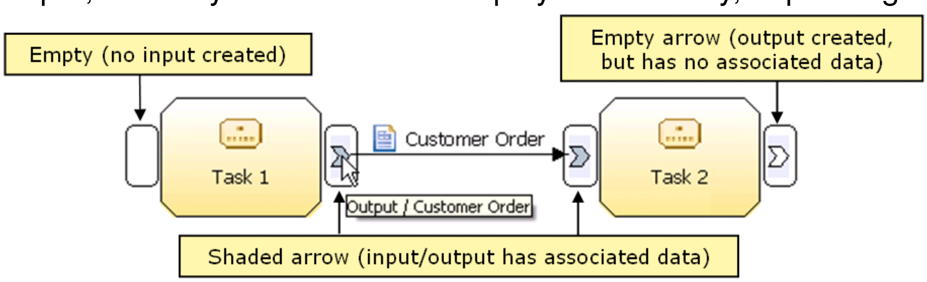
This mode allows the more technically focused user to specify and view additional details of process and data models. For example, it allows you to specify business rules and logic that apply to model elements, and a broader set of specifications for data attributes.

Note

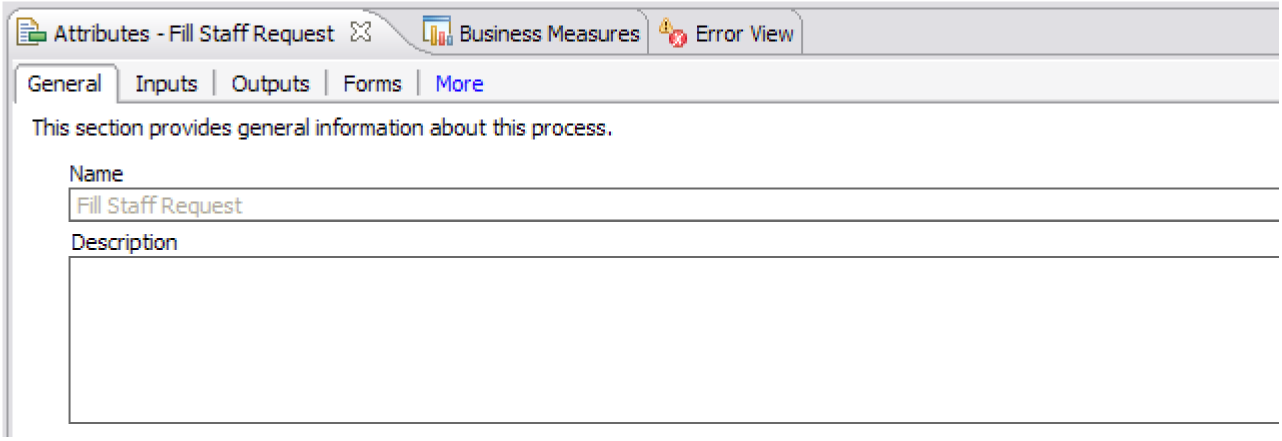
If you are using **original** style in the diagram, you will see two new small empty icons on both the left and right sides of each element in the process diagram as well as outside the diagram boundary. These are the inputs and outputs defined for each task and for the process. These icons do not appear if you are in the Basic mode. Note that there are boxes outside of the diagram boundaries (left and right sides). In this process model, there will be incoming data (input) to start the process and data flowing out of the process (output) when it is completed. The arrows inside the boxes indicate that there are data defined for input or



output, and they are sometimes displayed differently, depending on their settings:

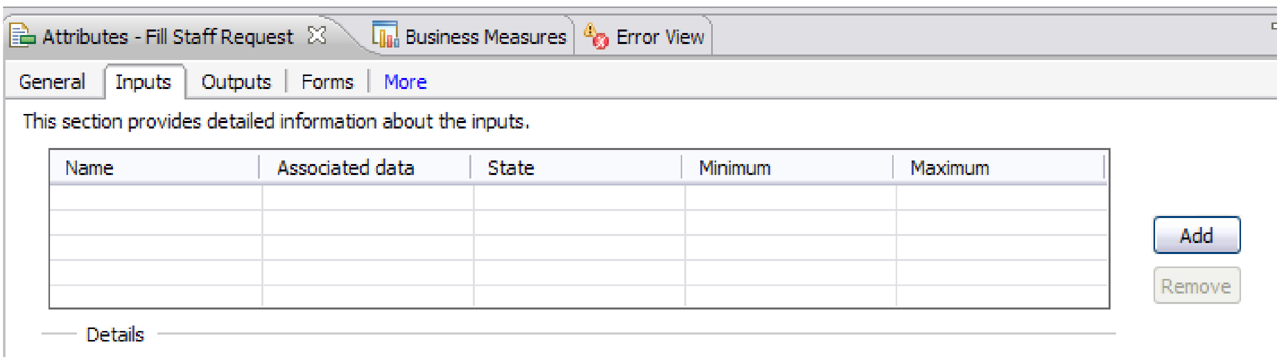


__ 3. Click the process diagram background, and notice that the **Attributes view** now focuses on the process itself. This focus is on the attributes view of the Fill Staff Request process.



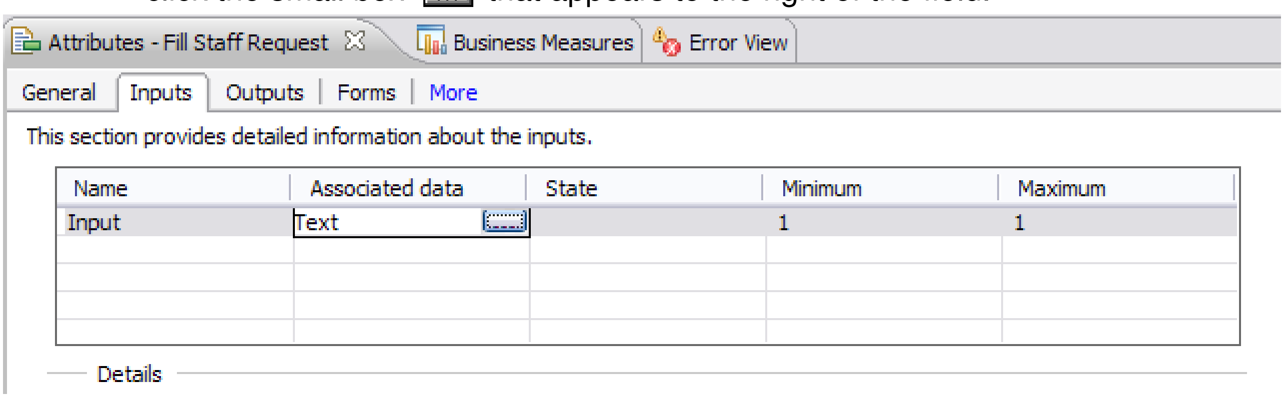
__ 4. Add an input for the **Fill Staff Request** process.

__ a. In the **Attributes** pane, select the **Inputs** tab and click the **Add** button.



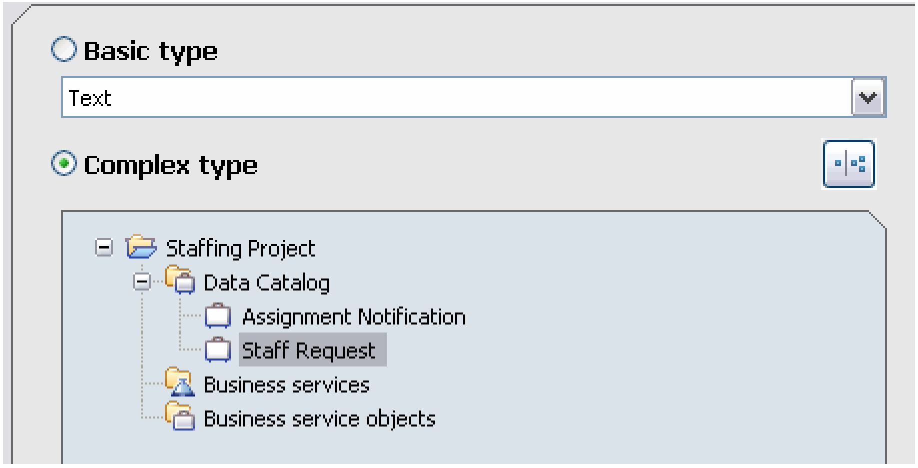
A new row is created in the **Input Settings** table.

__ b. Under **Input Settings**, in the **Associated Data** column, double-click **`Text`**, and click the small box that appears to the right of the field.



A dialog box is displayed.

__ c. Select the **Complex type** radio button and select **Staff Request** under **Staffing Project > Data Catalog**.



__ d. Click **OK**.

Staff Request is now associated as an input for the **Fill Staff Request** process.

Name	Associated data	State	Minimum
Input	Staff Request		1

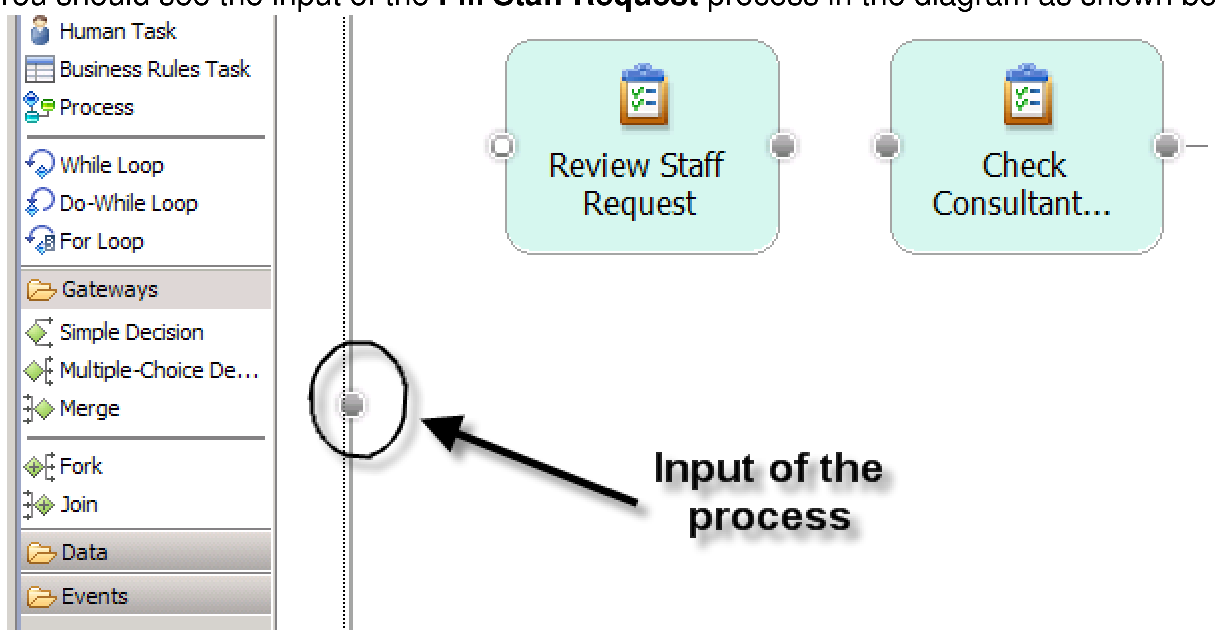
__ 5. Add an output attribute for **Fill Staff Request.**

__ a. Click the **Outputs** tab.

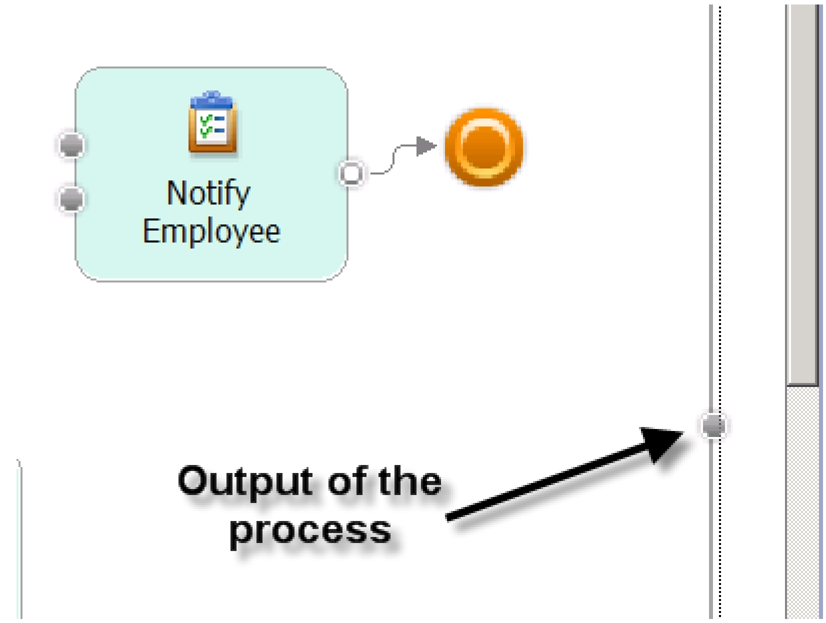
__ b. Click the **Add** button.

__ c. Select **Assignment Notification** as an associated data.

You should see the input of the **Fill Staff Request** process in the diagram as shown below:

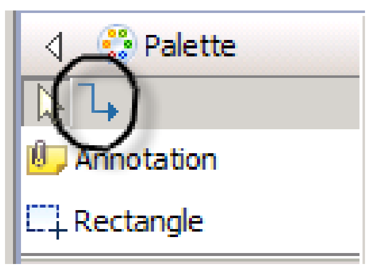


You should see the output of the **Fill Staff Request** process in the diagram as shown below:



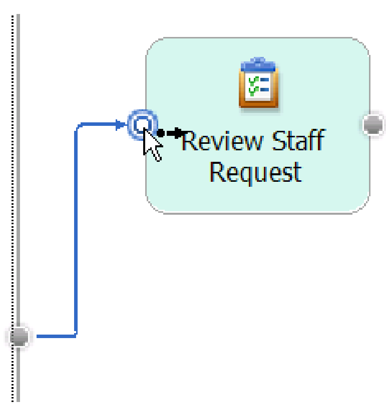
__ 6. Connect the process **Input (Staff Request)** to the input of the **Review Staff Request** task.

__ a. To do this, first select the **Connector** icon from the palette.

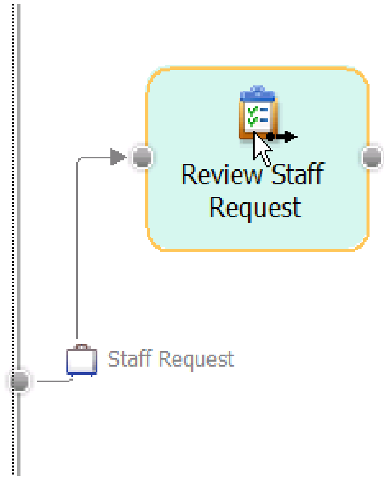


__ b. Click the input of the process (see below).

__ c. Drag the connector to the **Input** of the **Review Staff Request**.



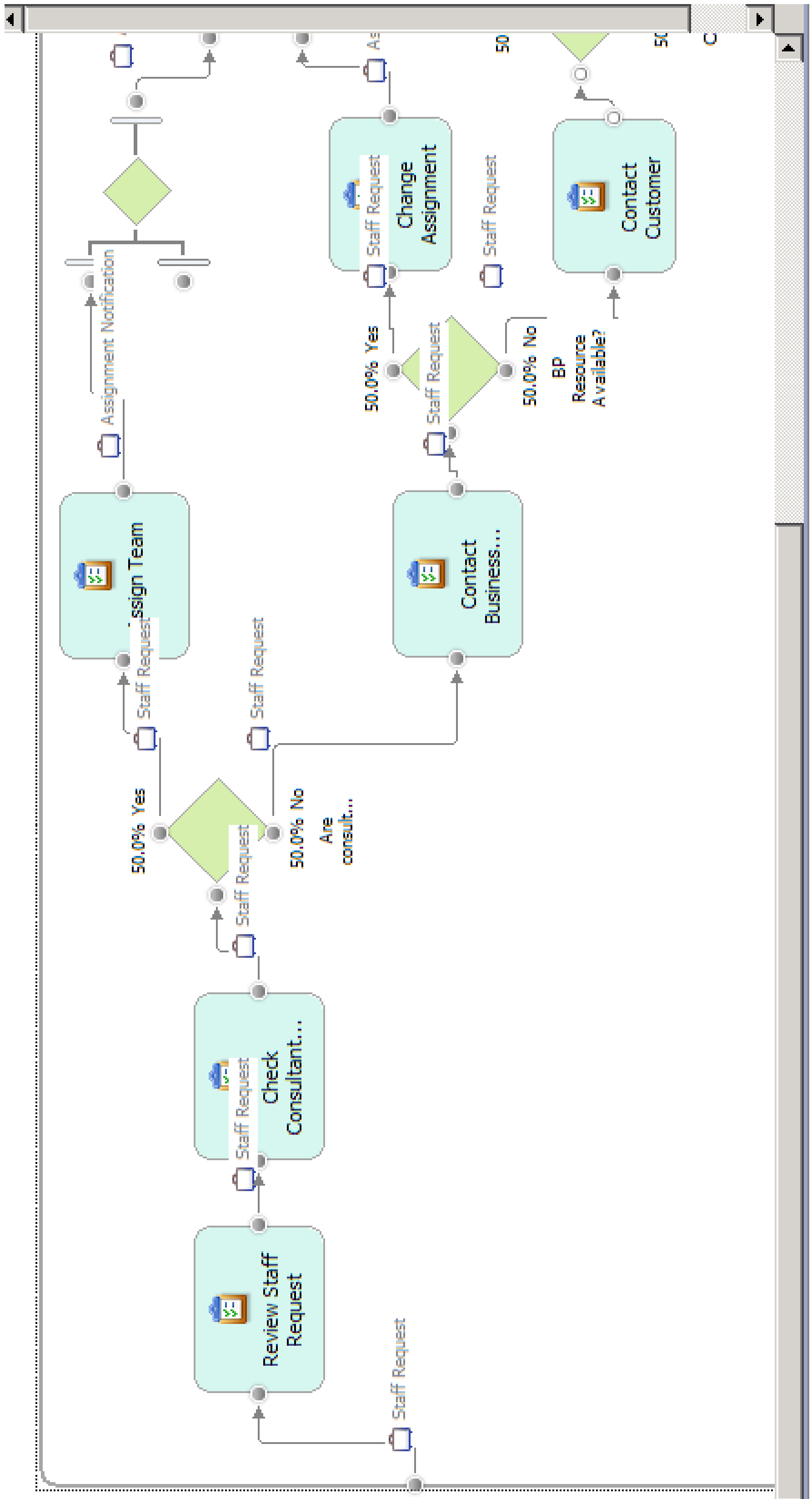
An input associated with Staff Request was automatically created for the Review Staff Request task. The connection between the Process Input and the Review Staff Request task now has the Staff Request data association.



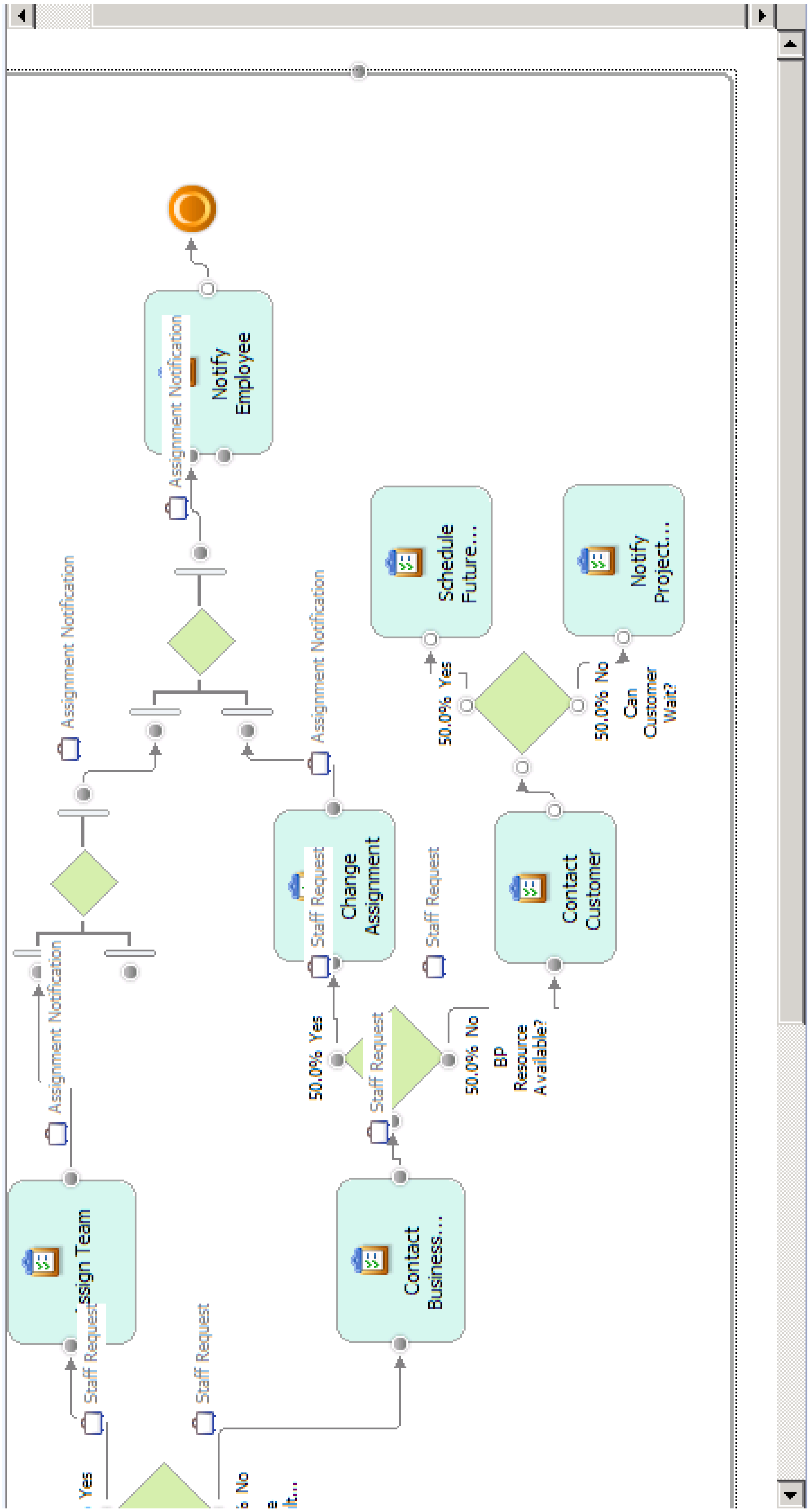
__ 7. Add additional inputs and outputs to the other tasks in your process.

__ a. Change the output for **Contact Business Partner** from **Assignment Notification** to **Staff Request**.

__ 8. Once you defined all the input and output, you can connect the all the process elements as follows:

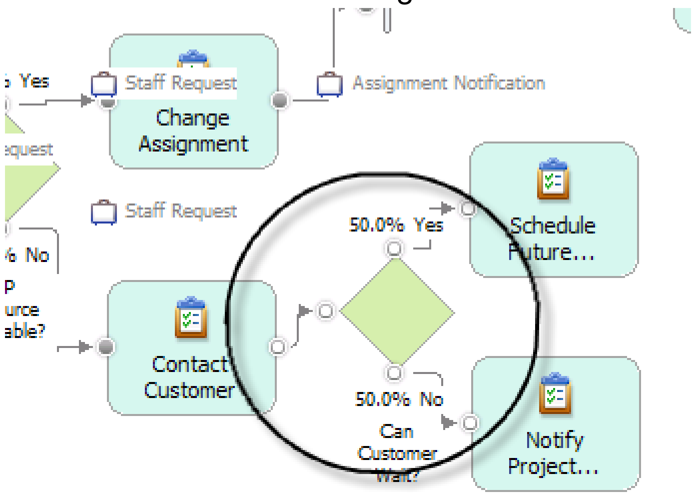


__ 9. Diagram continued:

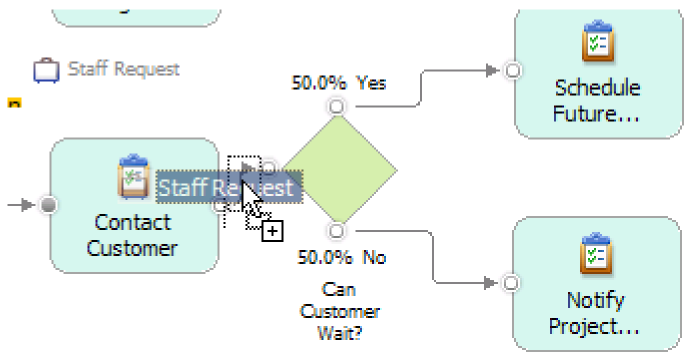


__ 10. Press Ctrl+S to save the diagram.

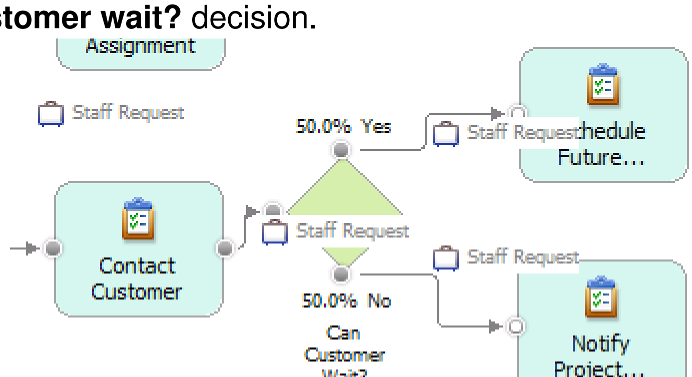
Some of the tasks' inputs and outputs have not been associated with any business item or data. You can associate the business item to the connection by dragging and dropping it from the Project tree to the connection in the diagram.



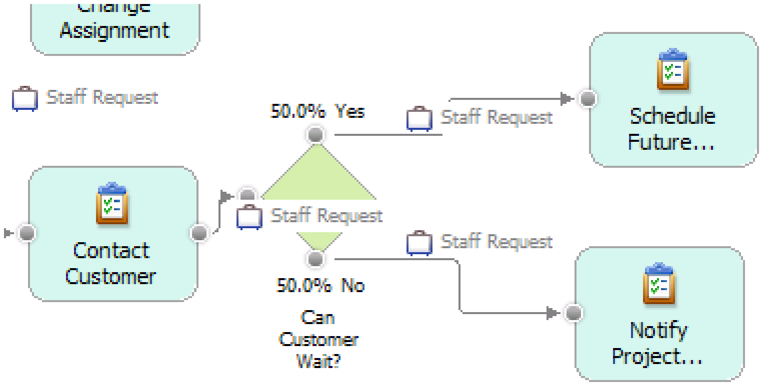
__ 11. Select **Staff Request** from the Data Catalog, and drag it from the Project tree, and drop it to the connection as follows:



__ 12. It will automatically assign the **Staff Request** to the two output connections of the **Can Customer wait?** decision.



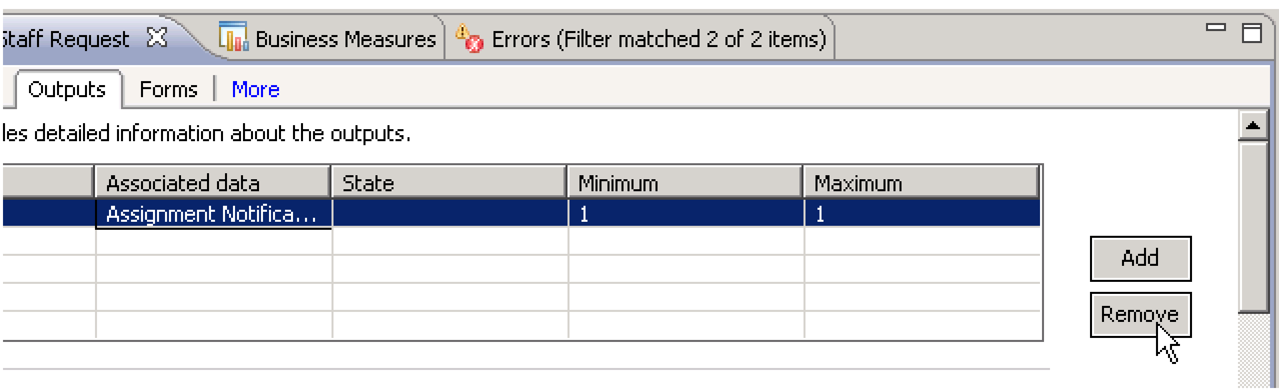
___ 13. Repeat the previous step to drop the **Staff Request** to the two output connections of the **Can Customer wait?** decision so that it will assign **Staff Request** to the inputs of both **Schedule Future Assignment** and **Notify Project Executives**.



The **Notify Employee** task has two inputs because a merge was not used when it was created in the previous exercise, so you will correct this by deleting the extra input which does not have a connection.

___ 14. Select **Notify Employee** and then the **Inputs** tab in the attributes pane.

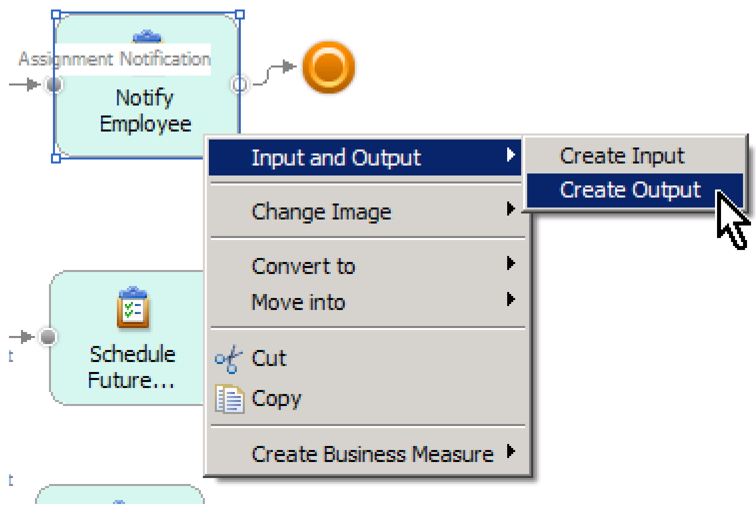
___ 15. Delete the second input by clicking **Remove**.



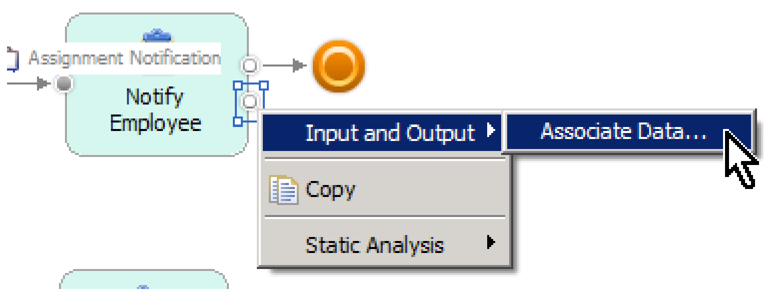
___ 16. The **Notify Employee** task not only was the last task of the Fill Staff Request process, but will pass the Assignment Notification as an output of this process; therefore, you will add an extra output. This output will associate with Assignment Notification and connect to the output of the process.

___ a. Select the **Notify Employee**.

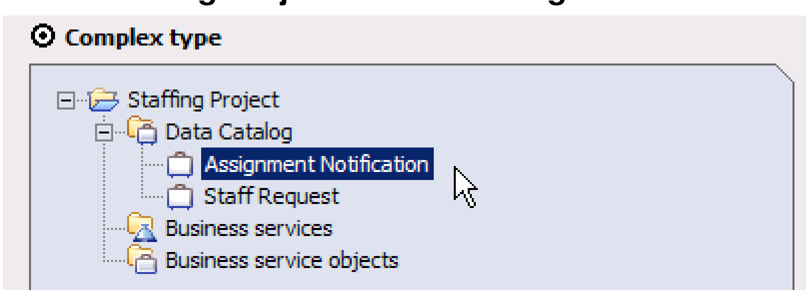
__ b. Right-click to select **Input and Output > Create Output**.



__ c. Right-click the output you just created, and select **Input and Output > Associate Data**.

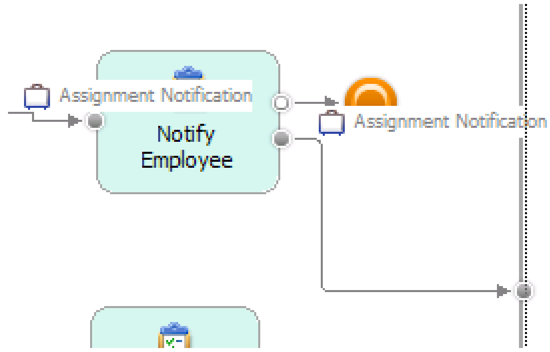


__ d. Select the **Complex type** radio button and select **Assignment Notification** under **Staffing Project > Data Catalog**.



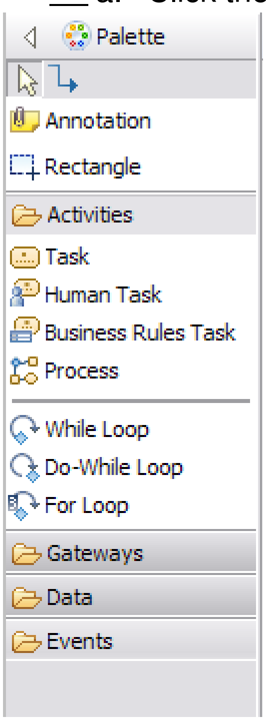
__ e. Click **OK**.

__ 17. Now you can connect the non-empty output, which has the association of **Assignment Notification**, to the output of **Fill Staff Request** process.

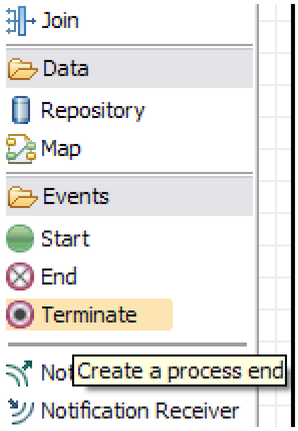


__ 18. You will need to add another Terminate node next to the **Notify Project Executive** task to indicate this is end of the path, and there is no output being passed to the output of the process.

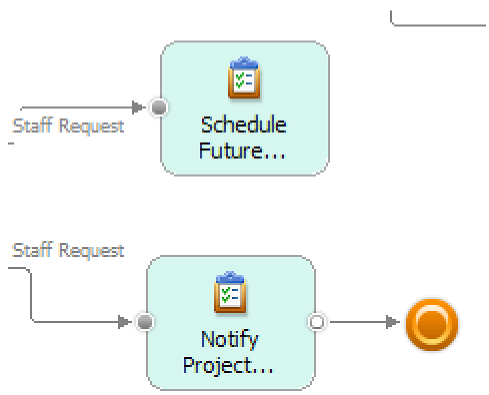
__ a. Click the **Event** button from the palette.



__ b. Select **Terminate**.



__ c. Place the **Terminate** next to the **Notify Project Executive** task and connect them.



__ 19. Save your work (Ctrl+S).

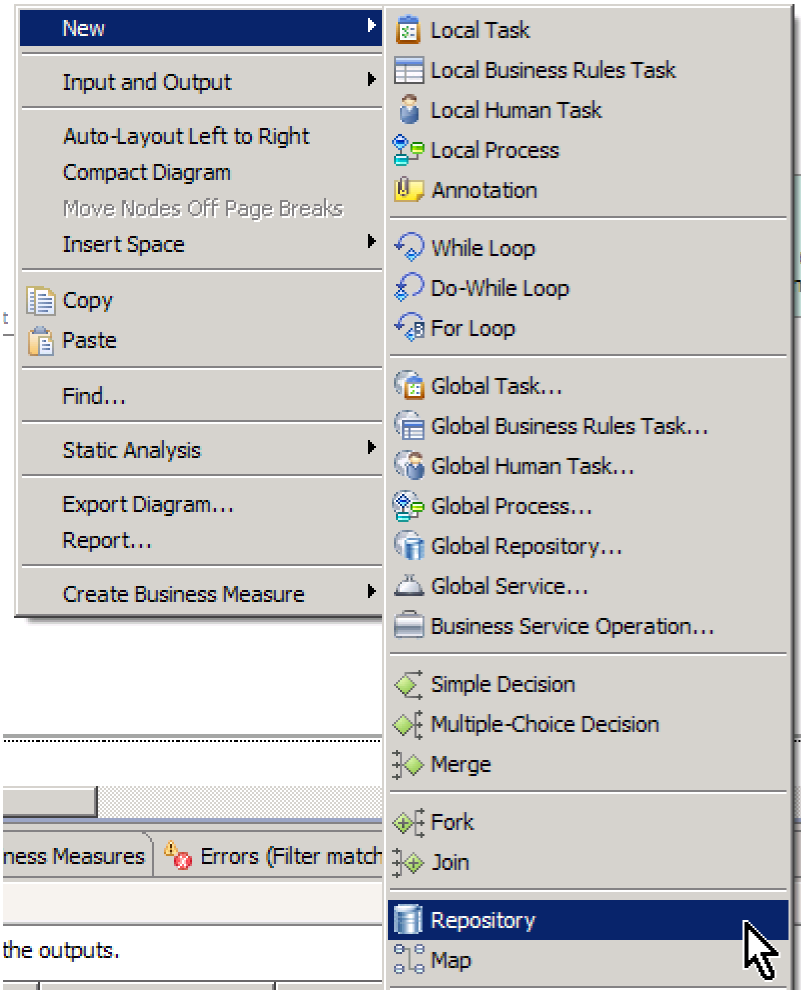
Part 4: Adding a repository

Repositories are storage areas for the information created in a business process. Every repository has a name and an associated type. Usually, the name of a repository is the same as the name of the business items it contains. For example, a repository for invoices is called Invoices.

Use repositories when you have several activities (tasks, processes, or services within a process) that need to access or share the same information. Rather than passing information along flows from one activity to another, you can instead place the information in a common place from which several activities can then access.

In this case, the assumption is that the staff request database is owned by the Fill Staff Request process and can only be used by elements within this process. You will add a local repository in the diagram to represent the database in which the project manager will store the staff request.

__ 1. Right-click the background of the process diagram, and select **New > Repository**.



__ 2. Enter **Staff Request DB** as name of the local repository.

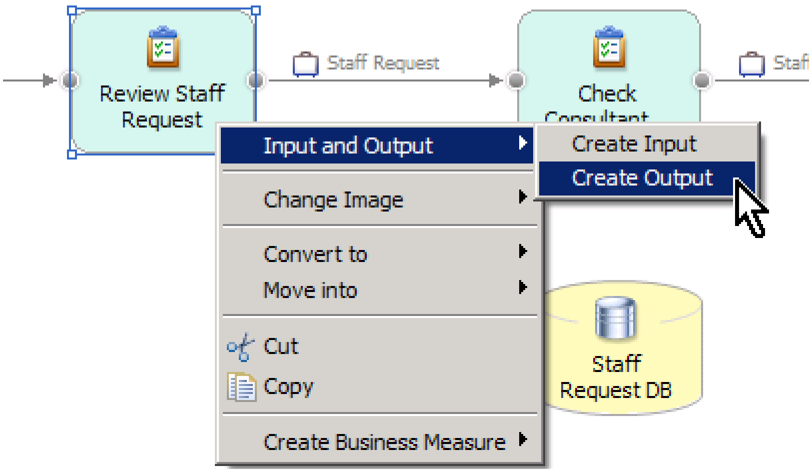
__ 3. Add an attribute to **Staff Request DB.**

__ a. In the **Attributes** pane, select the **General** tab.

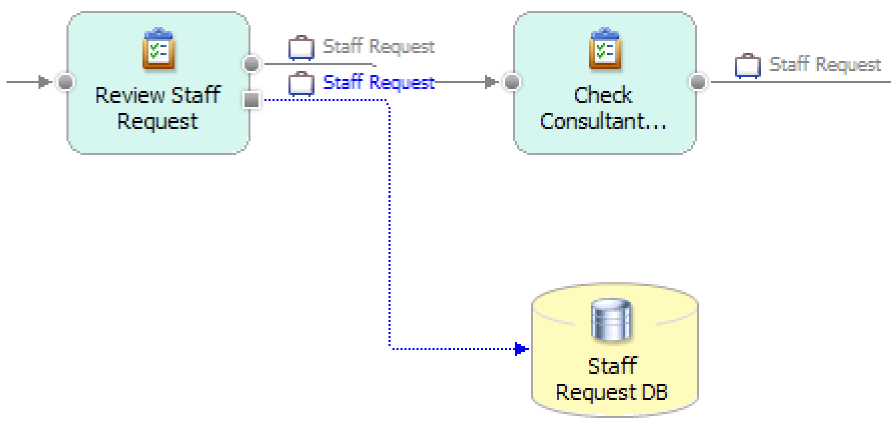
__ b. Scroll down to Associated data to click the **Browse** button.

__ c. Select the **Complex type** radio button and select **Staff Request** under **Staffing Project > Data Catalog**.

__ 4. Right-click the task **Review Staff Request** and select **Input and Output > Create Output.** An extra output will be created for the task.



__ 5. Connect the extra output of **Review Staff Request** task to the **Staff Request DB**.



__ 6. Save your work (Ctrl+S).

Part 5: Setting visual attributes

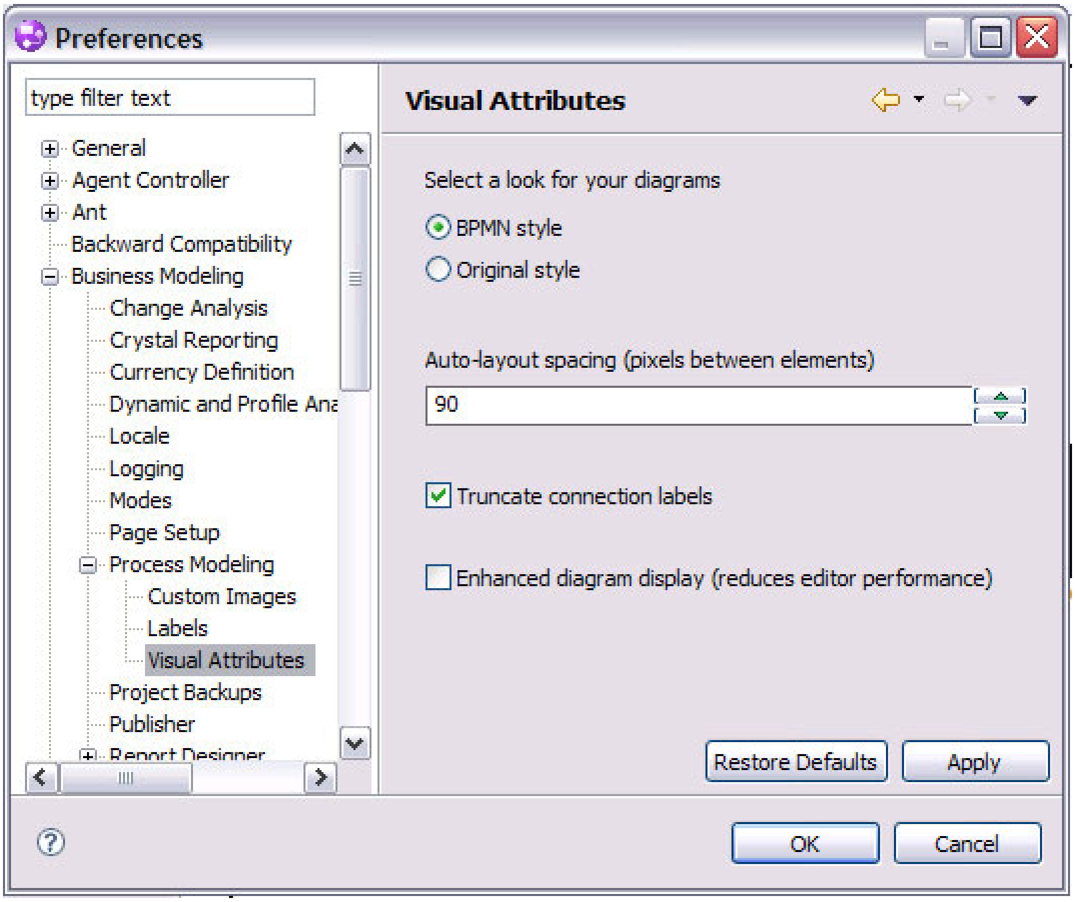
__ 1. Click the **Apply 4-pane layout** button from the toolbar.

__ 2. Now, you will learn to utilize the **Truncate connection labels** function in order to make your model appear less cluttered.

__ a. From the menu toolbar, navigate to **Window** > **Preferences**.

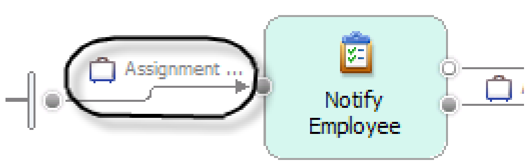
__ b. Expand **Business Modeling** > **Process Modeling** and select **Visual Attributes**.

__ c. Select the check box next to **Truncate connection labels**.



__ d. Click **OK**.

__ e. Verify that the labels above the connections in your diagrams have been truncated.



__ 3. Right-click anywhere in the background of the diagram, and select **Auto-Layout Left to Right**.

__ 4. Save your work (Ctrl+S).

Note

Note: If the process editor is unable to display the entire connection label, it truncates the text it cannot display and uses ellipses to indicate that it has truncated the label. You can

see the entire label by placing the pointer on the connection. After a brief pause, the full label displays as hover text.

Part 6: Converting local to global elements

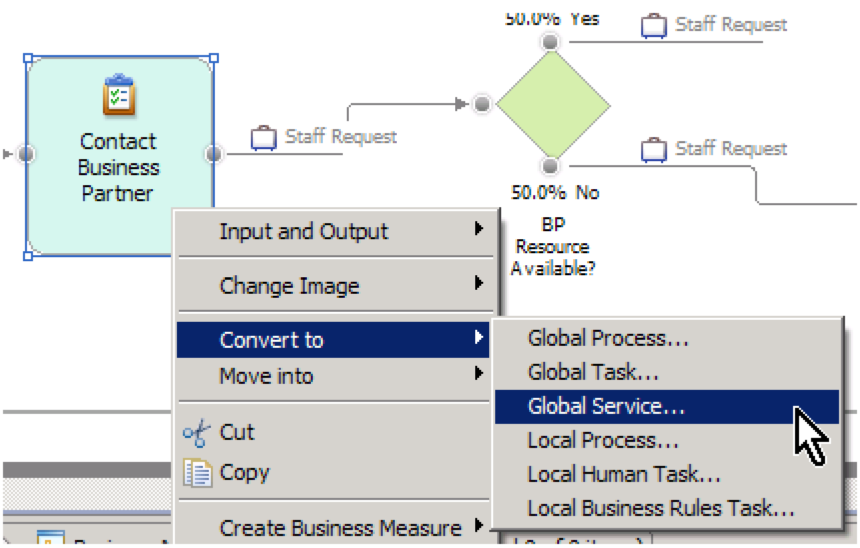
You may decide to use a local task in another process. You can convert the local task to a global task that will appear in the Project Tree view. All the existing attributes and connections will be maintained. Similarly, you can convert a local task to a global process or service.

To convert a local task to a global task, process, or service, you must have previously created a local task in a process diagram, and you must have the process diagram open.

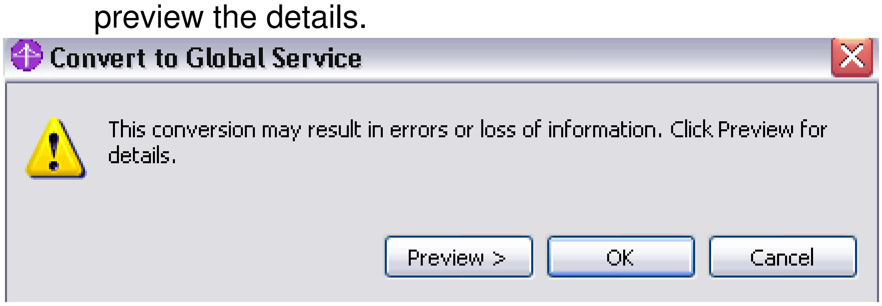
In this case, the following tasks will be converted to global elements:

Convert **Contact Business Partner** from local task to global services. Services are external processes outside the organization that can be used within the organization's processes. Services either provide input to the organization or receive output from the organization. Services have well-defined inputs and outputs, but their internal processes are unknown to the organization and cannot be changed.

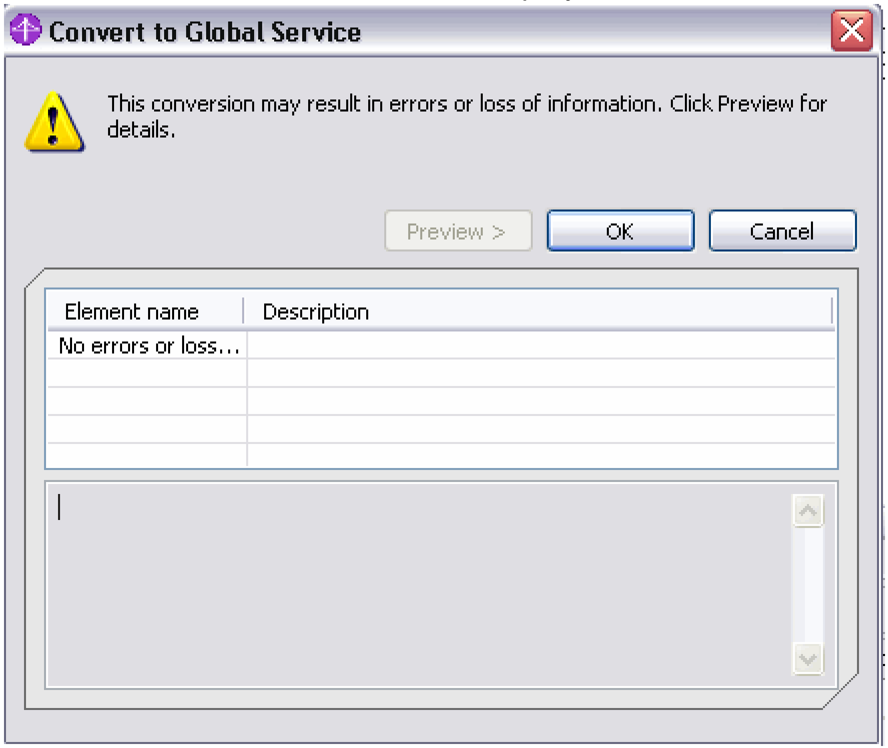
__ 1. Select the **Contact Business Partner** task and right-click to select **Convert to > Global Service**.



__ 2. Click the **Preview** button from the **Convert to Global Service** pop-up window to preview the details.



No errors or loss of information is displayed.

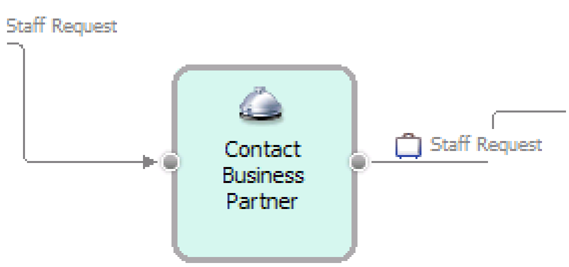


__ 3. Click **OK**.

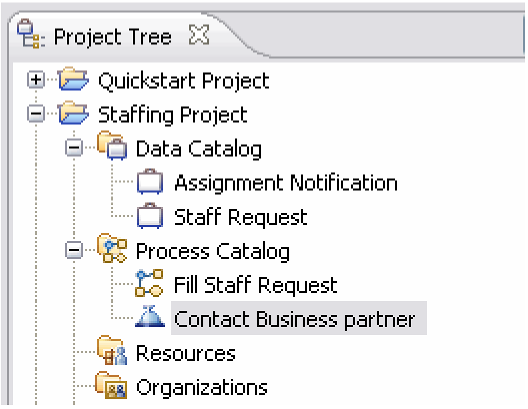
The **Create a new service** window displays.

__ 4. Click **Finish**.

The conversion of **Contact Business Partner** from local task to global services is now complete.



Now the **Contact Business Partner** is a service that appears on the Project Tree under the Process Catalog.



__ 5. Save changes (Ctrl+S).

Part 7: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

Hint

You can search help using the key words from the question.

__ 1. What kind of Information will be lost when you convert a task or process to another element?

____

__ 1. What are the definitions of global repository and local repository?

____

__ 2. Exit WebSphere Business Modeler.

__ 3. Review the flashcards for this unit.

END OF EXERCISE

Exercise 4. Defining elements and attributes

Estimated time

01:00

What this exercise is about

This exercise covers defining elements and attributes.

What you should be able to do

At the end of the exercise, you should be able to:

- Edit and create data structures
- Define organization units
- Create roles
- Associate colors with roles
- Create timetables
- Create resources
- Assign roles and organization units to tasks
- Assign costs and durations
- Assign classifiers

Exercise instructions

This lab walks you through the steps to update the business process model.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab4_workspace`

Part 2: Creating and editing data structures

In this part of the exercise, you will be adding business items and editing their attributes. These business items will be used later to define the data flow between process activities.

__ 1. Add a new business item called `Customer Information`.

__ a. From the Project Tree, right-click **Data Catalog** and select **New > Business Item**.

__ b. Enter `Customer Information` as the name of the new business item and click **Finish**.
The business item editor for **Customer Information** will appear in the pane to the right.

__ 2. Add the following four attributes to the Customer Information business item:

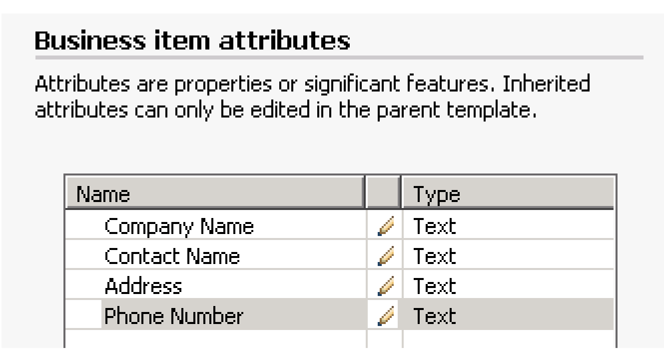
- Company Name
- Contact Name
- Address
- Phone Number

__ a. Click **Add** to create a new attribute for the business item.

__ b. Click the gray attribute field and type `Company Name`

__ c. Leave the default Type as **Text**.

__ d. Repeat the previous steps to add the remaining attributes.



__ 3. Save changes made to the business item (Ctrl+S).

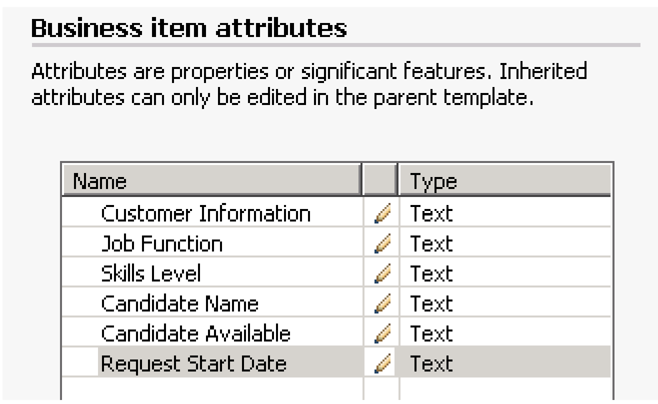
__ 4. Close the business item editor by clicking the **X** in the **Customer Information** tab at the top of the window.

__ 5. Open the **Staff Request** business item editor and add the following attributes:

- Customer Information
- Job Function
- Skills Level
- Candidate Name
- Candidate Available
- Request Start Date

__ a. In the Project Tree, double-click the existing **Staff Request** business item under **Staffing Project** > **Data Catalog**.

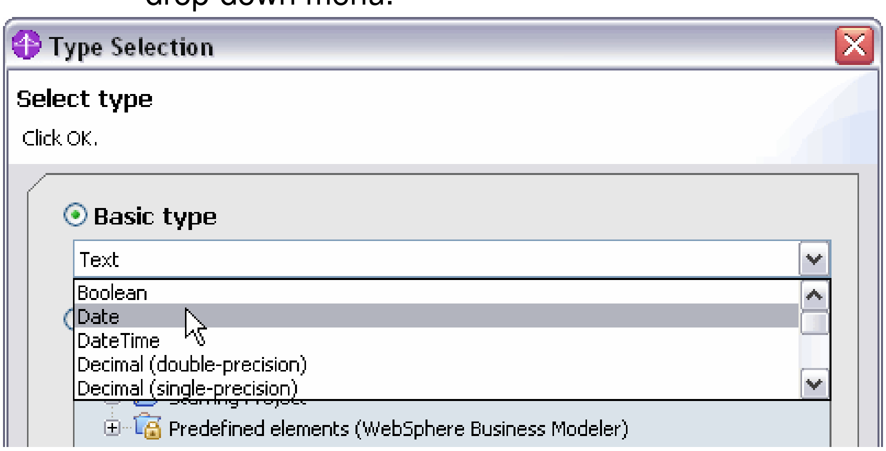
__ b. Click **Add** and add each of the following business item attributes:



__ 6. Change the data type of Request Start Date to **Date**.

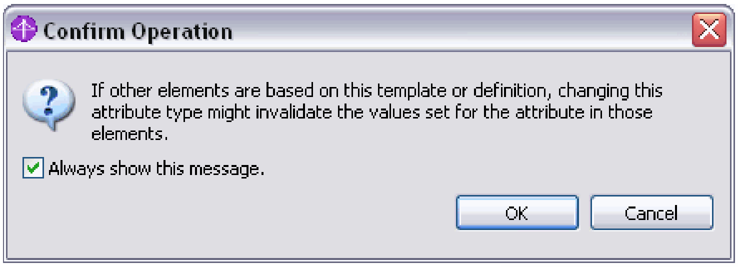
__ a. In the **Request Start Date** row, click the field under the **Type** column and click the small "**...**" button ( ) that appears to the right of the field.

__ b. In the **Type selection** window, under **Basic type**, select **Date** from the drop-down menu.



__ c. Click **OK**.

__ d. Click **OK** when the **Confirm Operation** dialog box appears.



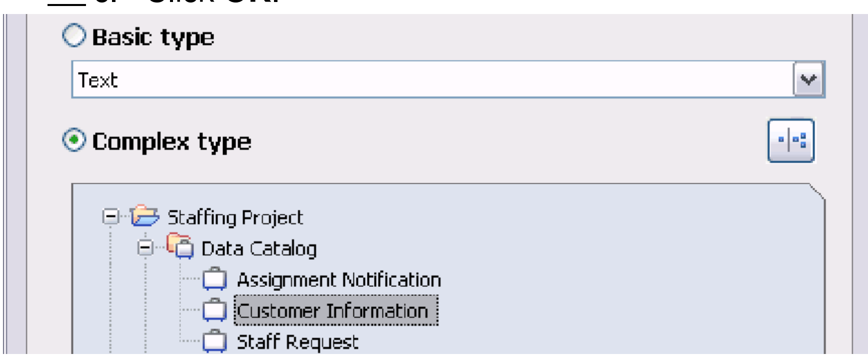
__ 7. Change the data type of Customer Information to **Customer Information**.

__ a. In the **Customer Information** row, click the field under the **Type** column and click the small "**...**" button ( ).

__ b. In the **Type selection** window, select **Customer Information** under **Staffing Project > Data Catalog**.

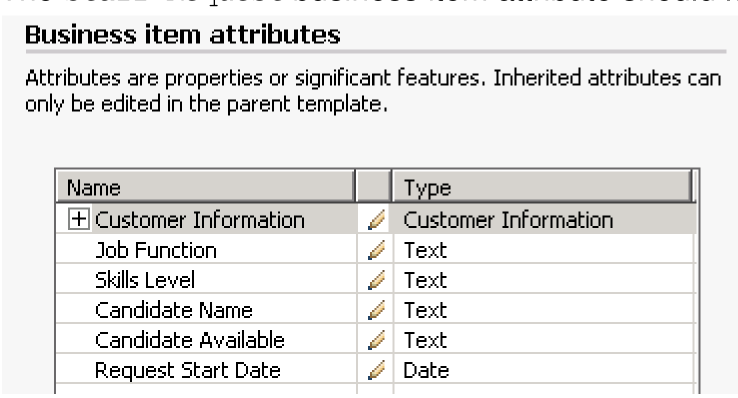
Note that the **Complex type** radio button is now selected (instead of **Basic type**).

__ c. Click **OK**.

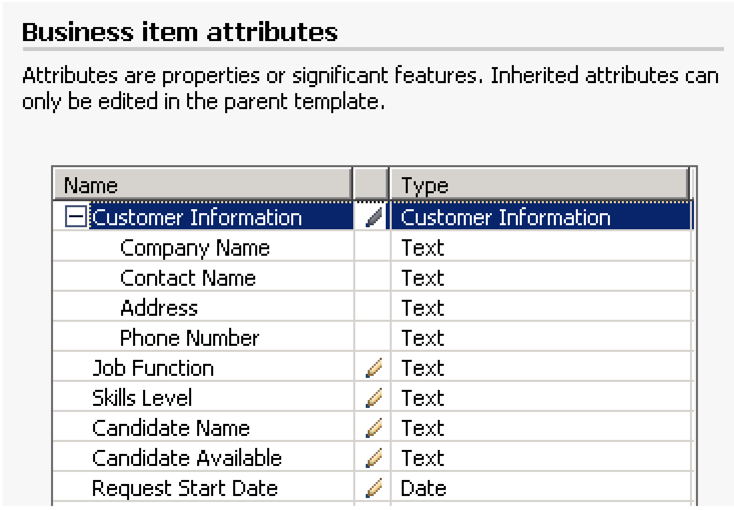


__ d. Click **OK** when the **Confirm Operation** dialog box appears.

The `Staff Request` business item attribute should look as follows:



__ 8. Next to the **Customer Information** field, click the (**+**) icon to view the attributes of the Customer Information business item that was built at the beginning of this exercise.



__ 9. Save your changes (Ctrl+S) and close the **Staff Request** business item editor.

Part 3: Creating organization units

In this section, you will be adding organization units to the project. Later in this exercise, you will assign these organization units to specific elements in the process diagram.

Note

An **organization** is an entity where people cooperate to accomplish specified objectives, such as an enterprise, a company, or a factory.

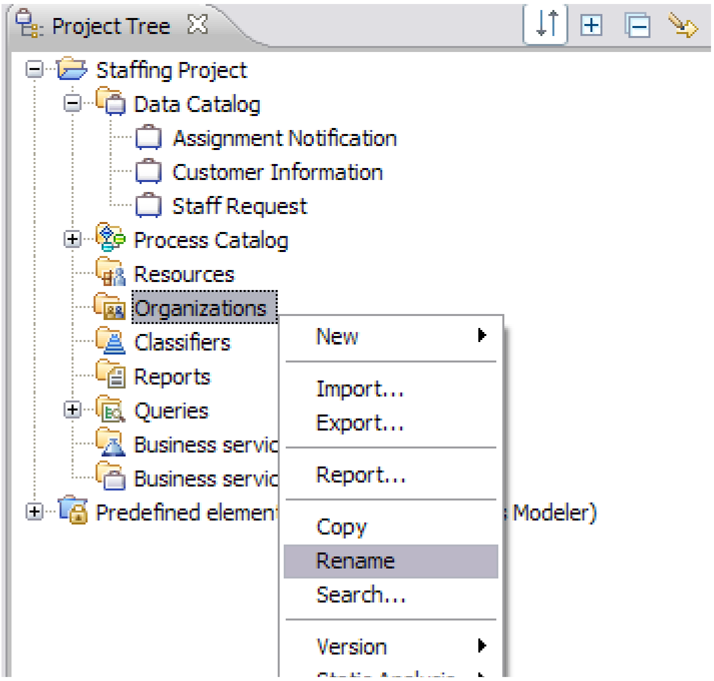
An **organization unit** is a particular occurrence or example of an organization definition.

Examples:

- Organization definition: Department
- Organization units: Sales and Marketing, Human Resources, Customer Service

__ 1. In the Project Tree, rename the **Organizations** folder to `Organizations Catalog`.

__ a. From the **Project Tree**, under **Staffing Project**, right-click **Organizations** and select **Rename**.



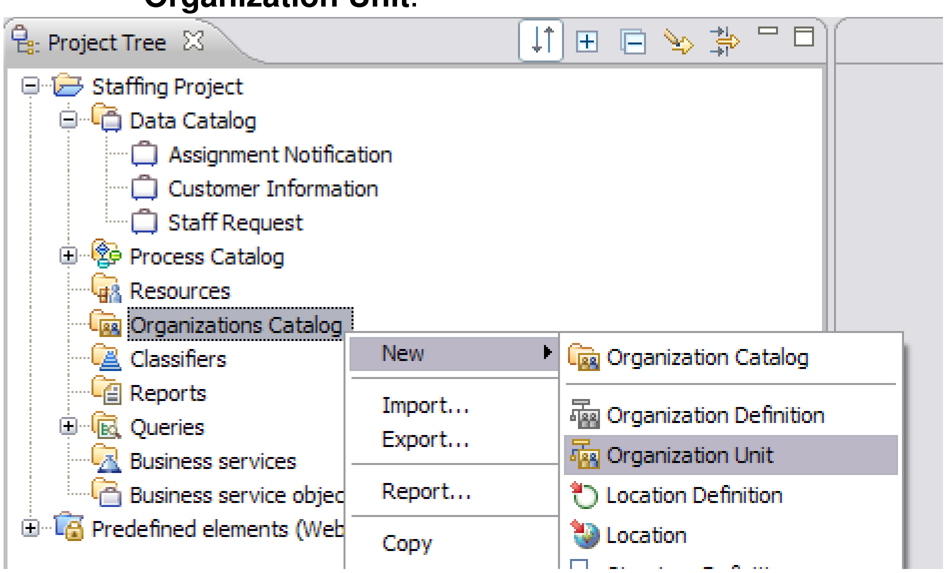
__ b. Type `Organizations Catalog` and press Enter.

Note

Keyboard shortcut: To rename an element, select the item and then press the F2 key on the keyboard.

__ 2. Add a new organization unit called `Human Resources` and assign the color **green**.

__ a. From the **Project Tree**, right-click **Organizations Catalog** and select **New > Organization Unit**.

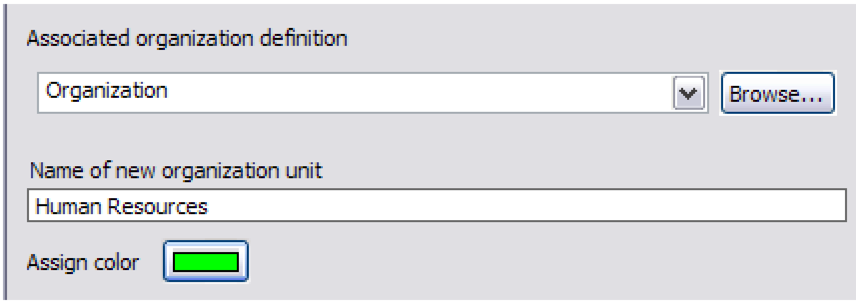


__ b. Accept the default organization definition of **Organization**.

__ c. Under **Name of new organization unit**, type **`Human Resources`**

__ d. Click the gray button next to **Assign Color** and select a **green** color to be assigned to this organization unit.

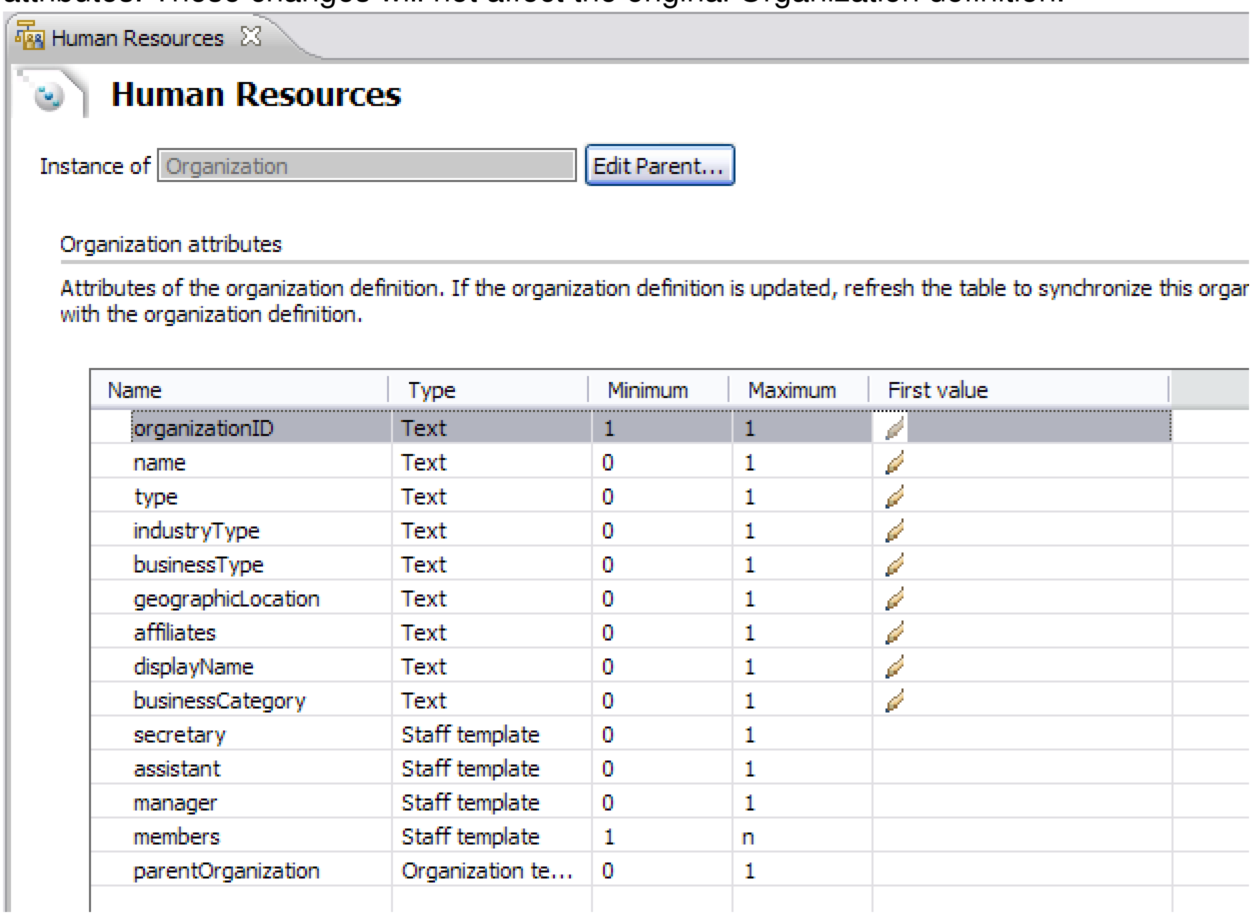
This color assignment will be used in the future for color-coding purposes.



__ e. Click **OK** and click **Finish**.

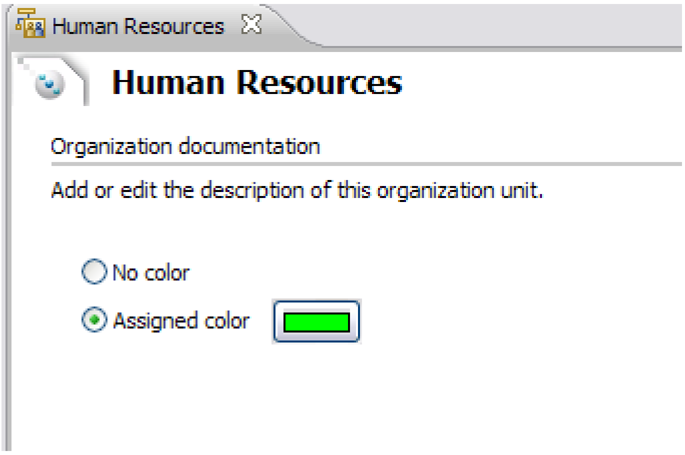
The organization editor for **Human Resources** opens in the right pane.

Note that the organization attributes are already populated. Because this organization unit uses the definition called **Organization**, it shares the same attributes. These attributes can be edited or removed from the Human Resources organization unit. You can also add attributes. These changes will not affect the original Organization definition.

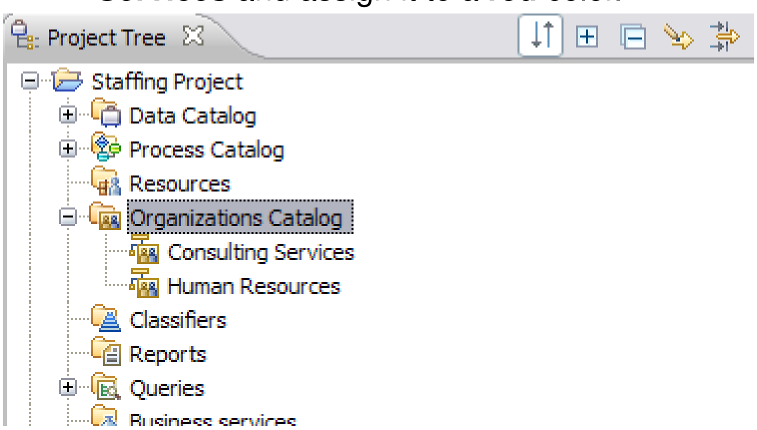


Note

Tip: To remove or change the assigned color for an organization unit, click the **Documentation** tab at the bottom of the editor.



__ 3. Repeat the steps above to add another organization unit. Name it **Consulting Services** and assign it to a **red** color.



__ 4. Close the editors for these two organization units.

Part 4: Creating roles

In this part of the exercise, you will be adding roles to the project. These roles will be assigned to tasks in the process diagram.

Note

A **role** is a description of a function to be carried out by an individual or bulk resource, and the qualifications required to fulfill the function.

__ 1. In the Project Tree, rename the Resources folder to `Resource Catalog`.

__ a. From the **Project Tree**, right-click **Resources** and select **Rename**.

__ b. Type `Resource Catalog` and press Enter.

__ 2. In the Resource Catalog, add a role called `Consultant`.

__ a. Right-click **Resource Catalog** and select **New > Role**.

__ b. In the **Create a new role** window, under **Name of new role**, type `Consultant`

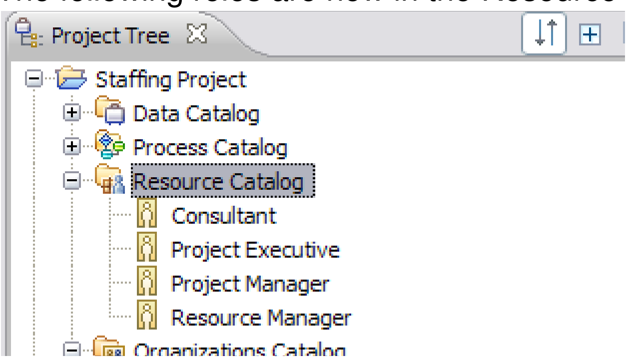
__ c. Click **Finish**.

The role editor for **Consultant** opens in the right pane.

__ d. Close the **Consultant** role editor.

__ 3. Repeat the steps above to add three more roles: `Project Executive`, `Project Manager`, and `Resource Manager`.

The following roles are now in the Resource Catalog:



__ 4. Close the editors for all roles.

Part 5: Creating timetables

In this section, you will be adding two timetables to the Resource Catalog. The first timetable, called Standard Work Schedule, essentially describes a 40-hour work week and will be assigned to resources later to specify their availability. To simplify and expedite the process of creating this timetable, a second timetable, X-Weekend, will be used to “subtract” the weekends from each week. The X-Weekend timetable is used as an exemption period in the main timetable, Standard Work Schedule.

Note

Simply stated, a **timetable** is a schedule of times.

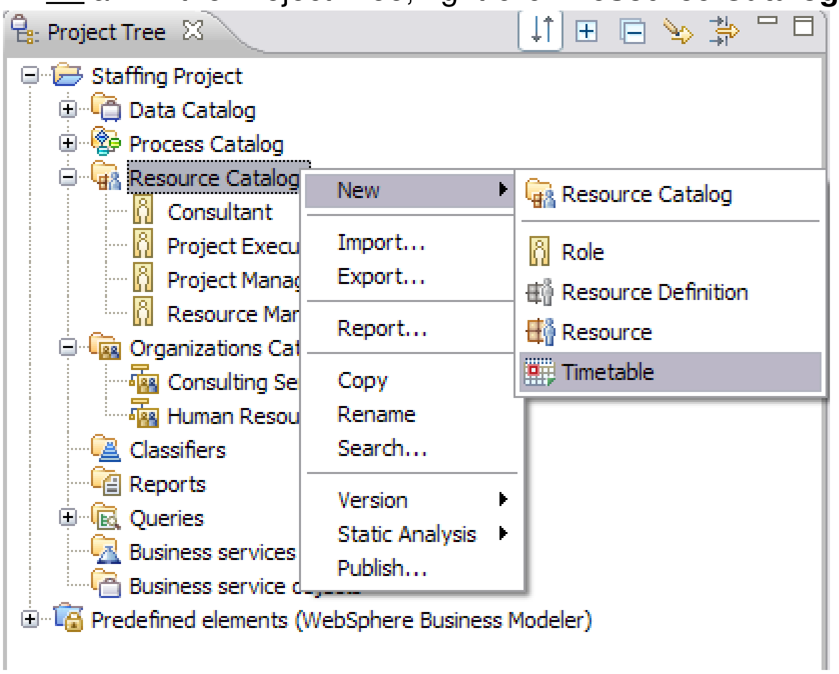
Timetable attributes define the timetable, indicating such parameters as the date the timetable begins and the number of times it should be repeated.

You can determine the time period for which the timetable is valid, whether for a few days or weeks, or for an unlimited time. Timetable attributes enable you to define the length of the time period, how often it repeats (for example, daily or weekly), and how long it will continue to repeat.

In business process modeling, timetables are usually associated with resources or costs. For resources, timetables indicate availability (such as Monday to Friday). For costs, timetables are useful if the cost varies with time of day (such as electricity) or time of year (such as seasonal foods).

__ 1. In the Resource Catalog, add a new timetable called `Standard Work Schedule`.

__ a. In the Project Tree, right-click **Resource Catalog** and select **New > Timetable**.



__ b. In the **Create a new timetable** window, under **Name of new timetable**, type `Standard Work Schedule`.

__ c. Click **Finish**.

The **Timetable editor** opens in the right pane.

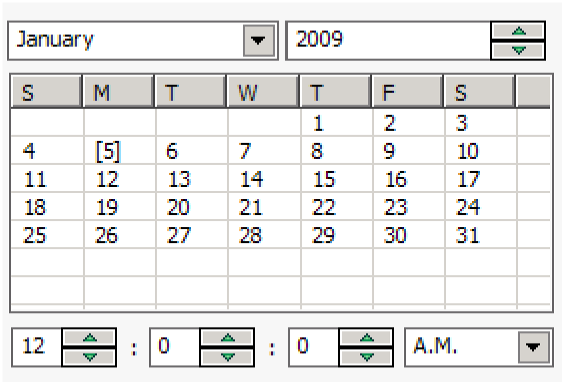
__ 2. Enter the following information in the **Standard Work Schedule** timetable:

__ a. At the top, enter `1 Days` for the **Repetition period**.
This ensures that the timetable will repeat every day.

__ b. Next to the **Beginning on** field, click the **Select Time** button.
A calendar opens.

__ c. In the calendar, select **Monday, January 5, 2009** and specify the time as **12:00:00 AM**.

Use the default time zone. It is not necessary to change the time zone.



This particular date was chosen because it falls on the first Monday of the year.

__ d. Click **OK**.

__ e. In the **Recurring Time Intervals** section, right-click **Time interval** and select **Rename**.

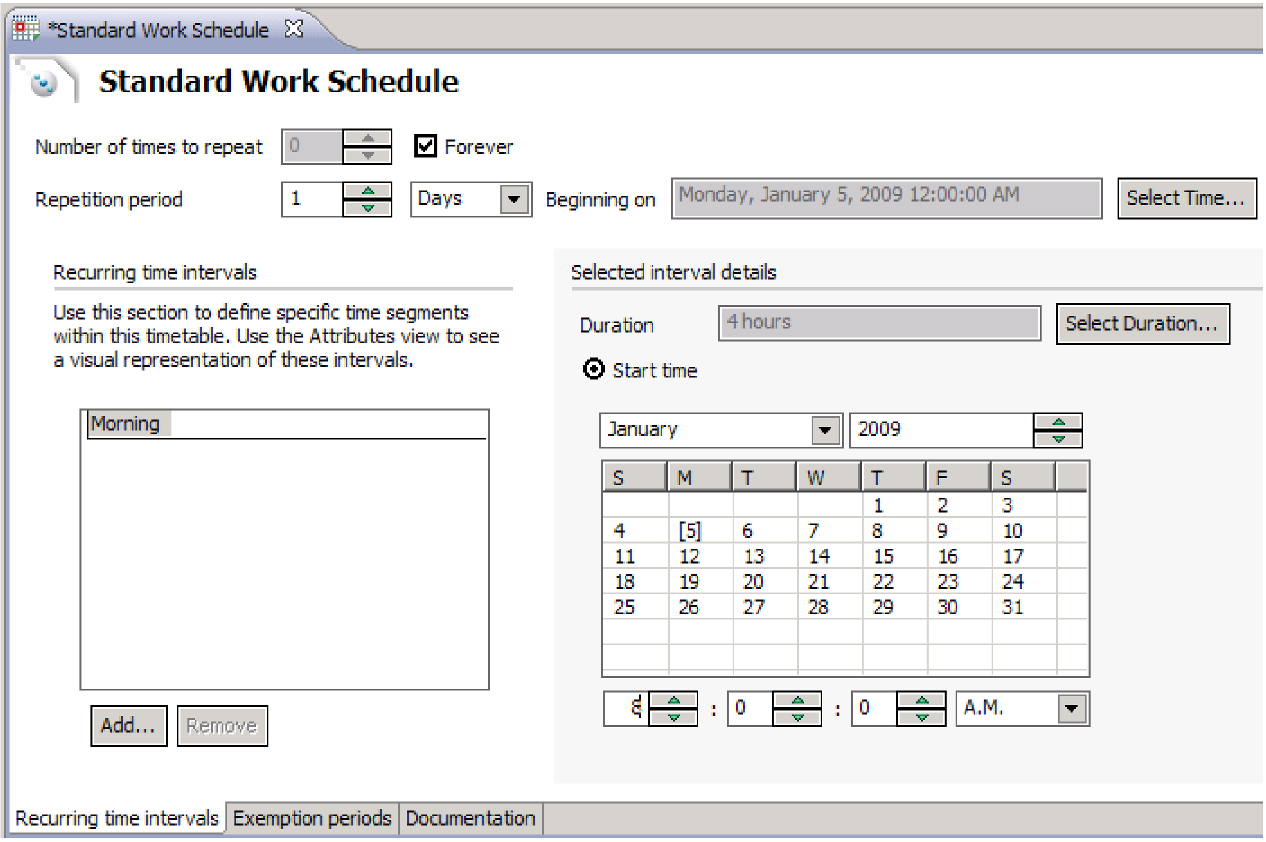
__ f. Type **`Morning`** and press **Enter**.

__ g. In the **Selected interval details** section, click the **Select Duration** button and enter **`4 hours`**.

__ h. Click **OK**.

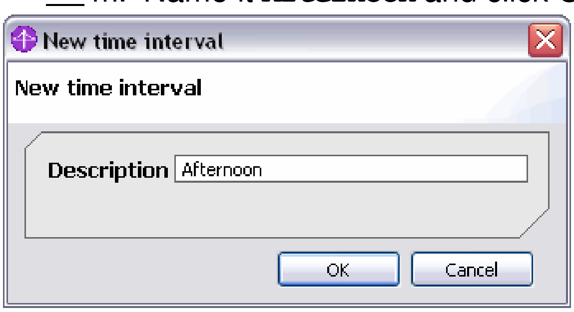
__ i. In the **Selected interval details** section, select **January 5, 2009** from the calendar.

__ j. Choose **`8:00:00 A.M.`** as the **Start time**.



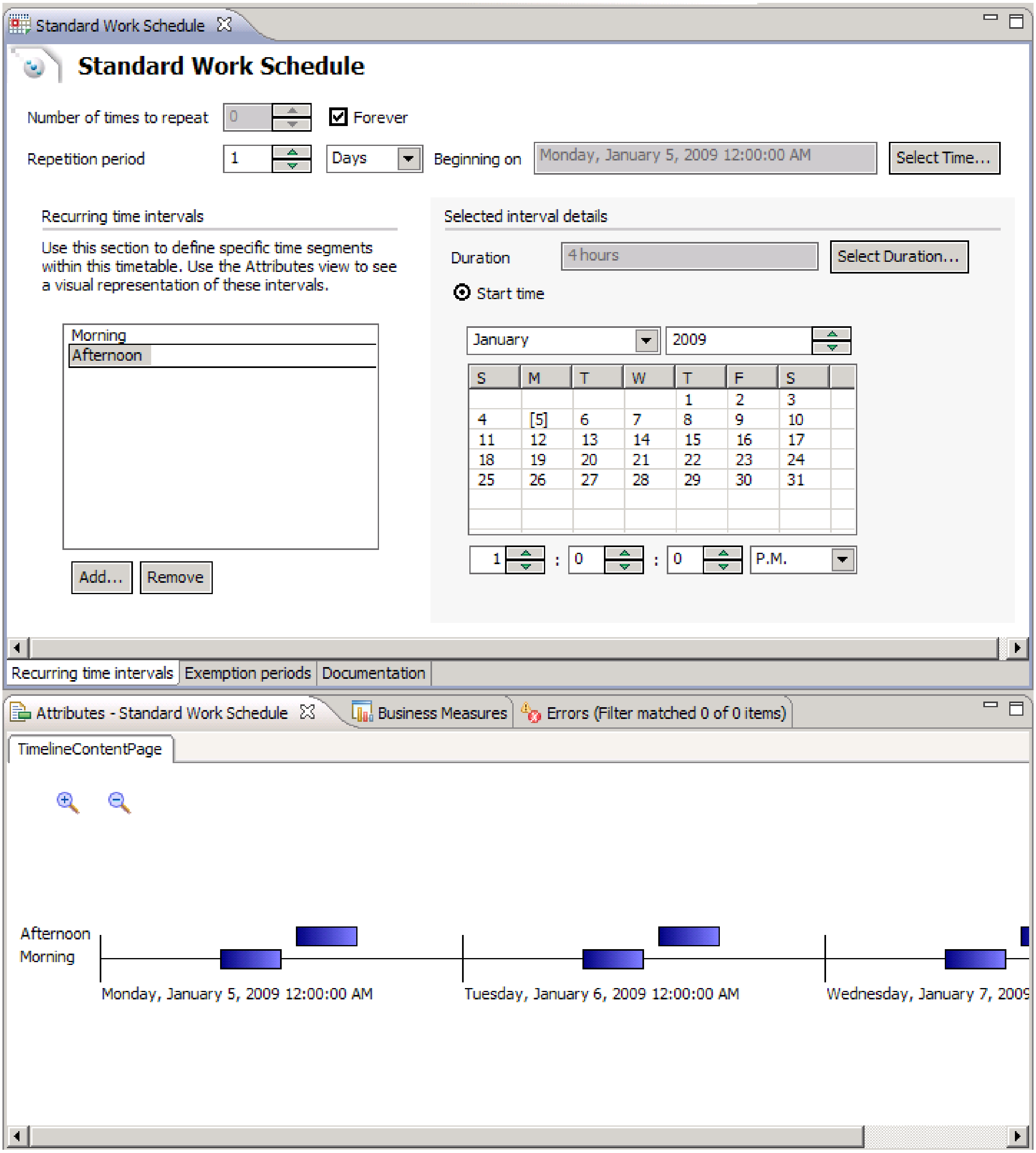
__ l. Add a second recurring time interval by clicking the **Add** button.

__ m. Name it **`Afternoon`** and click **OK**.



__ n. Verify that **Afternoon** is highlighted and assign the following details to the **Afternoon** time interval:

- Duration: **`4 hours`**
- Start time: **`January 5, 2009, 1:00:00 P.M.`**



Note

Note that each recurring time interval has its own set of details (duration, start date, and start time). These are separate from the attributes that describe the timetable itself (number of times to repeat, repetition period, and start date and time of timetable).

So far, your Standard Work Schedule timetable indicates that there is an eight-hour work day every day, with a one-hour lunch break at noon. This timetable repeats daily starting at 12:00 A.M., but the first shift starts at 8:00 A.M.

__ 3. Save your changes (Ctrl+S) and close the **Standard Work Schedule** timetable editor.

Next, you will create a timetable for the weekend, which will be used as an exemption period in the Standard Work Schedule timetable.

__ 4. Create a new timetable called **`X-Weekend`**.

In order to distinguish timetables that are being used as exemptions from regular timetables, the naming convention used in this exercise is to use the letter **`X`** as a prefix.

__ a. In the Project Tree, right-click **Resource Catalog** and select **New > Timetable**.

__ b. In the **Create a new timetable** window, type **`X-Weekend`** and click **Finish**. The timetable editor opens in the right pane.

__ 5. Enter the following attributes for the **X-Weekend** timetable:

- Repetition period: **`7 Days`**
- Beginning on: **`Monday, January 5, 2009 12:00:00 AM`** *

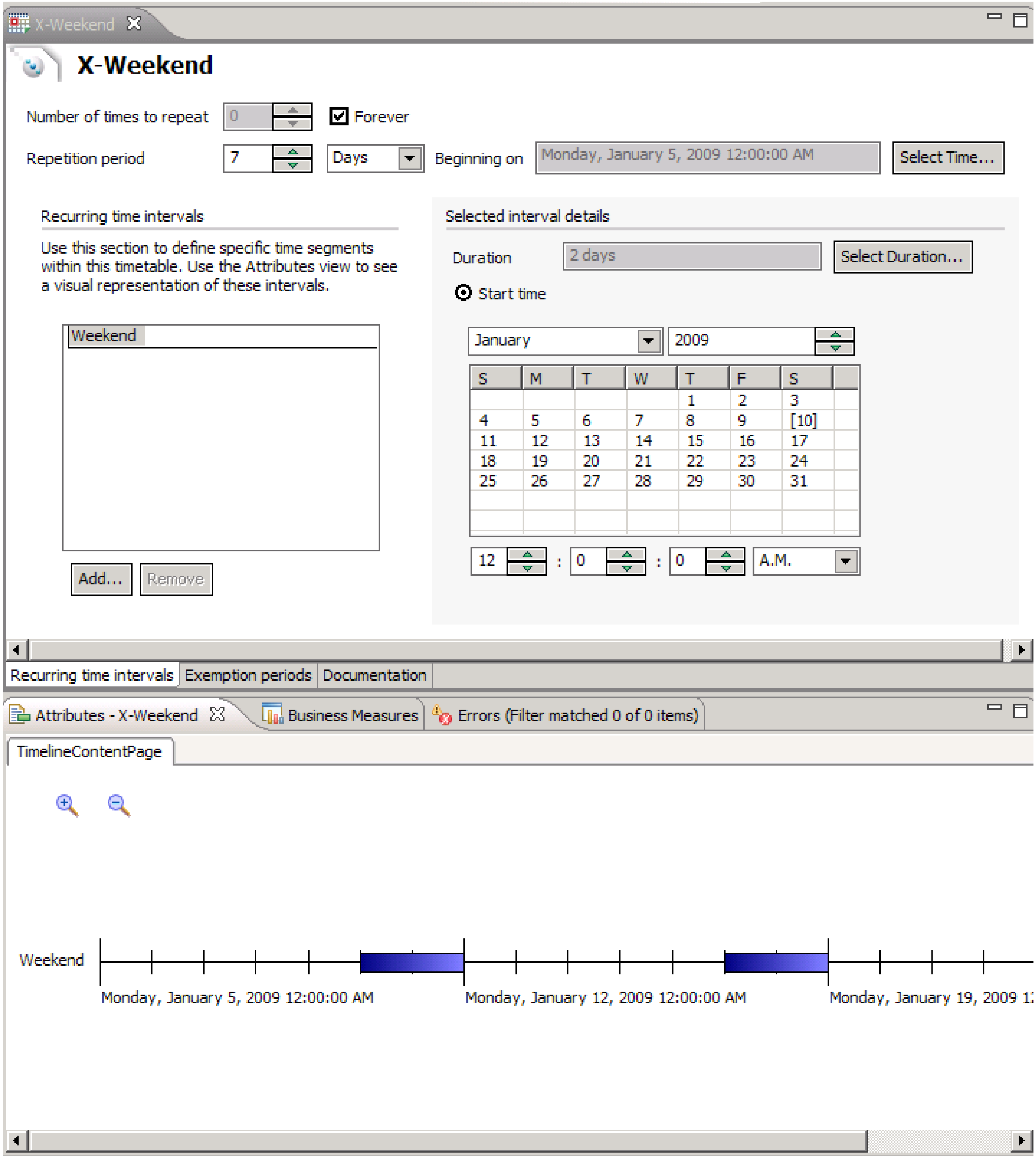
* Because this timetable is being used as an exemption timetable in the Standard Work Schedule timetable, you need to select a starting date that is on or before January 10, 2009, which is the first Saturday in the scope of the Standard Work Schedule timetable. This ensures that all weekends are exempted from the Standard Work Schedule timetable. In this exercise, January 5, 2009 was used for consistency purposes.

__ 6. Under **Recurring time intervals**, verify **Time interval** is selected and enter the following details in the **Selected interval details** section:
Duration: **`2 days`** (this represents the duration of the weekend)
Start time: **`January 10, 2008 12:00:00 A.M.`**

Tip: It is recommended that you rename **Time interval** to a more meaningful name, such as **Weekend**. This way, the Weekend label will display in the chart below the timetable, and it helps make the chart easier to read.

__ 7. Save your changes (Ctrl+S).

Check your Standard Weekend timetable against the following:



The X-Weekend timetable indicates that there is a 2-day weekend every seven days. This timetable will repeat every Saturday starting at midnight.

Now, you will be adding the X-Weekend timetable as an exemption to the Standard Work Schedule timetable.

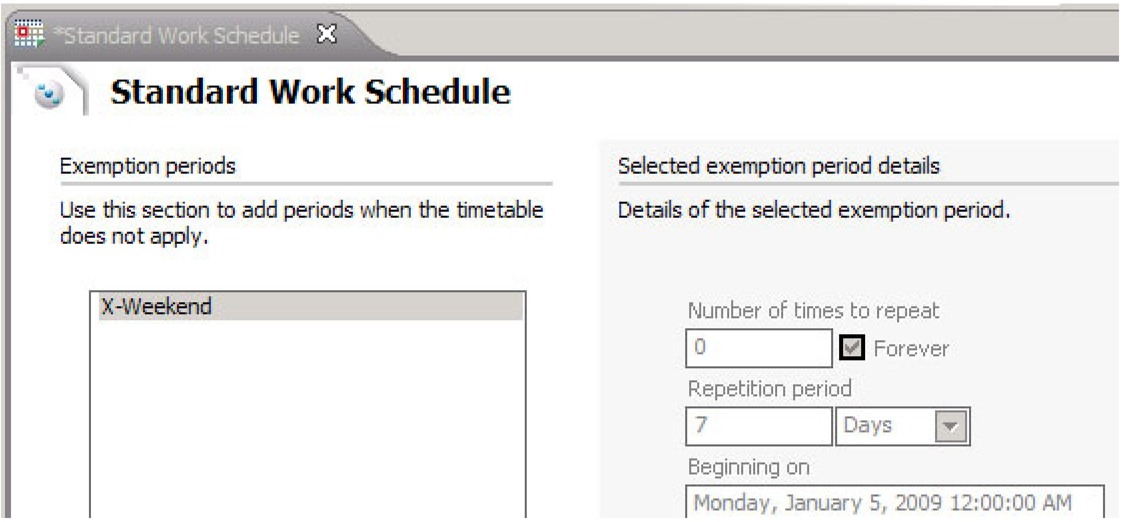
__ 8. Close the **X-Weekend** timetable editor.

__ 9. Add the X-Weekend timetable as an exemption period in the Standard Work Schedule timetable.

__ a. Double-click the **Standard Work Schedule** timetable under **Resource Catalog** in the Project Tree.

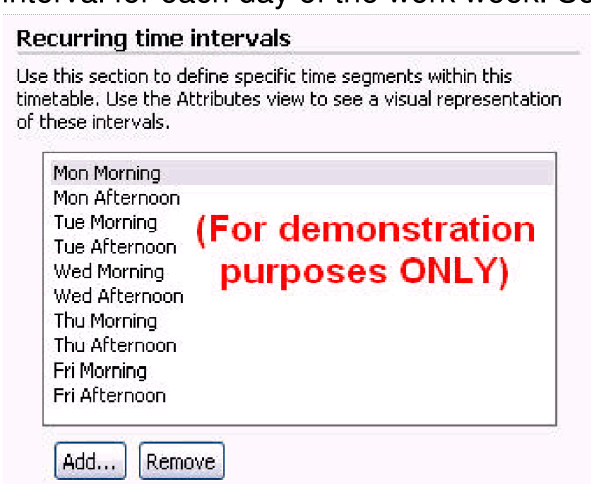
__ b. Click the **Exemption Periods** tab at the bottom of the timetable editor.

__ c. Click **Add** and select **X-Weekend**.



Note

The use of exemption periods is not required, but they help eliminate unnecessary and tedious work to define the five-day work week, assuming that each shift is identical. Without exemption periods, you would have to manually define a Morning and Afternoon time interval for each day of the work week. See example below:



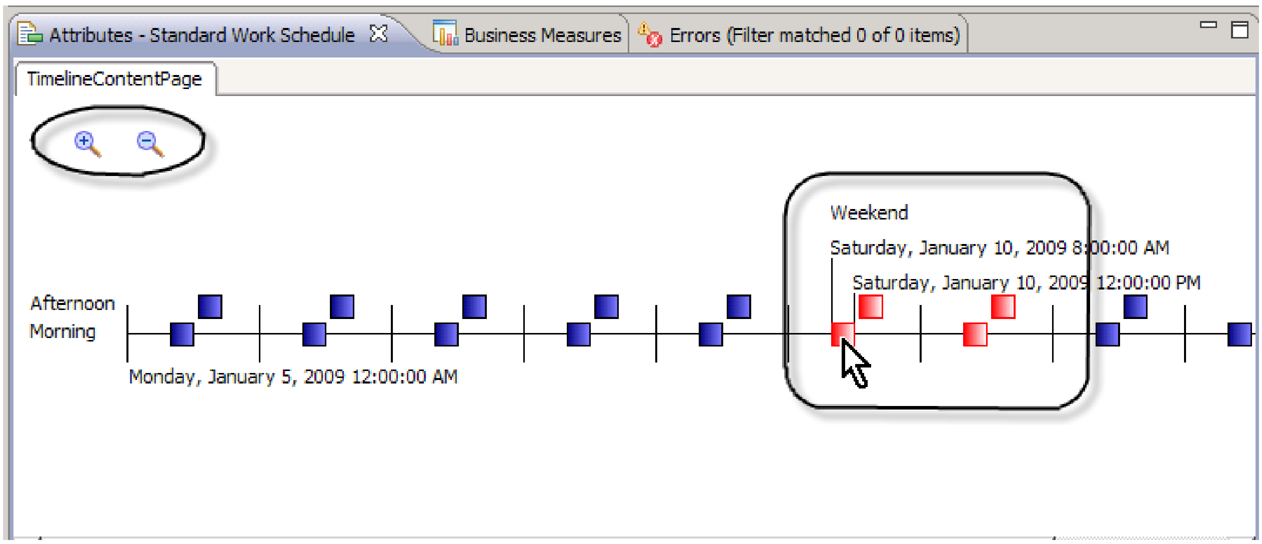
__ 10. Use the Attributes pane at the bottom to verify that your Standard Work Schedule timetable is correct by checking its graphical representation.

For each day, there are two bars that represent the Morning and Afternoon time intervals.

__ a. Click the icon for zooming out and continue clicking a few more times until you see at least seven days.

The bars for the weekends should be red, instead of blue. The red bars represent the exemption periods. This indicates that the standard work week does not include Saturdays and Sundays.

Note: If you do not see the red bars, or if the red bars fall on a weekday, first check that you saved your X-Weekend timetable. If the problem persists, check the attributes of the X-Weekend timetable and save any changes.

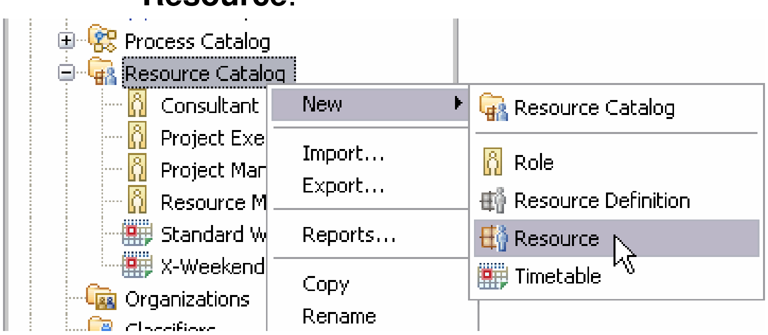


__ 11. Save your changes (Ctrl+S) for the Standard Work Schedule timetable and close the editor.

Part 6: Creating resources

__ 1. Now, you will learn to create new resources.

__ a. Right-click **Resource Catalog** from the Project Tree and select **New > Resource**.



__ b. At the **Create a new resource** screen, select **individual** as **Resource type**.

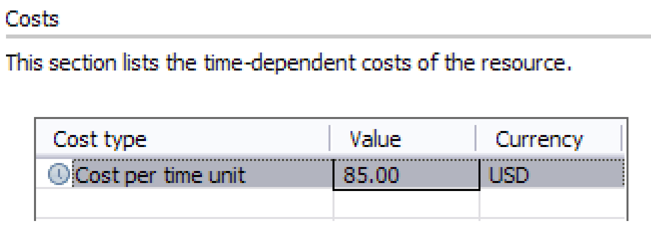
__ c. Select **Person** as **Associated resource definition**, type `Sophia` as **Name of new resource**, and click **Finish**.

A resource editor for **Sophia** is displayed in the right pane.

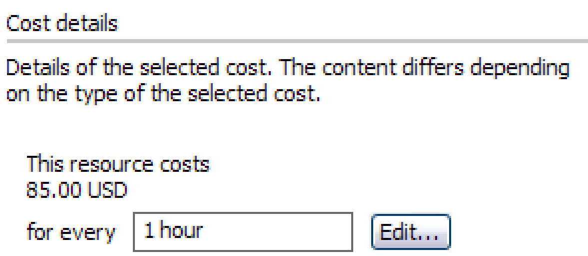
__ d. In the **Costs** tab, click **Add**.

__ e. Select **Cost per time unit** and click **OK**.

__ f. Click the cell under **Value** and enter `85.00` USD.

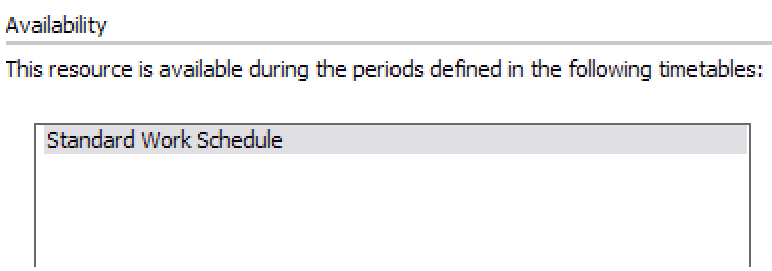


__ g. In the **Cost Details** to the right, `1 hour` as **Duration** as default.



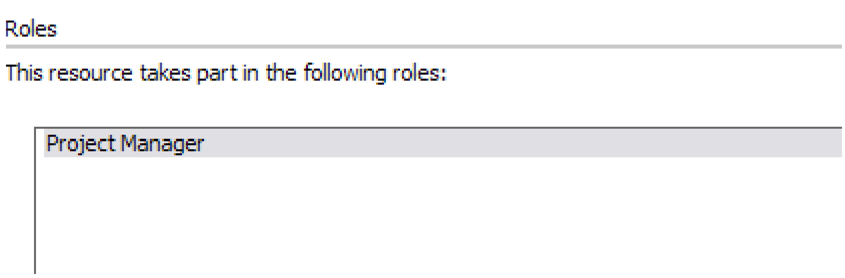
__ h. Click the **Availability** tab at the bottom of the pane and click **Add**.

__ i. Select **Standard Work Schedule** under **Resource Catalog** and click **OK**.



__ j. Click the **Roles** tab, and click **Add**.

__ k. Select **Project Manager** and click **OK**.



__ l. Click the **Attributes** tab and, under **Resource attributes**, select the **personId** row.

Resource attributes

Attributes of the resource definition. If the resource definition is updated, refresh the table to synchronize this res with the resource definition.

Name	Type	Minimum	Maximum	First value
personId	Text	1	1	
lastName	Text	1	1	
firstName	Text	0	1	
middleName	Text	0	1	
preferredName	Text	0	1	
gender	Text	0	1	
preferredLanguage	Text	0	1	

__ m. The pencil symbol indicates that this field is an input field.

First value

__ n. Click the cell under **First value**, and enter **`001`**.

__ o. Enter the following data for firstName and lastName.

Resource attributes

Attributes of the resource definition. If the resource definition is updated, refresh the table to synchronize this resou with the resource definition.

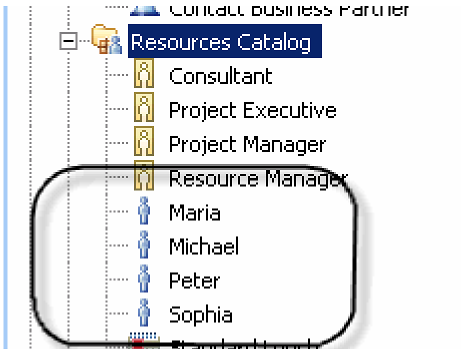
Name	Type	Minimum	Maximum	First value
personId	Text	1	1	001
lastName	Text	1	1	Smith
firstName	Text	0	1	Sophia
middleName	Text	0	1	
preferredName	Text	0	1	
gender	Text	0	1	
preferredLanguage	Text	0	1	

__ p. Save (Ctrl+S) and close the resource editor for Sophia.

__ 2. Repeat the previous steps in this section to create three new individual resources:

- **`Michael Johnson`**, with a cost of **`$125 USD`** per hour and availability of **`Standard Work Schedule`**, as **`Project Executive`** with person ID **`002`**.
- **`Maria Lee`**, with a cost of **`$65 USD`** per hour and availability of **`Standard Work Schedule`**, as **`Resource Manager`** with person ID **`003`**.
- **`Peter LaRue`**, with a cost of **`$55 USD`** per hour and availability of **`Standard Work Schedule`**, as **`Consultant`** with person ID **`004`**.

Now you have created the following individual resources:



Part 7: Assigning roles and organization units to tasks

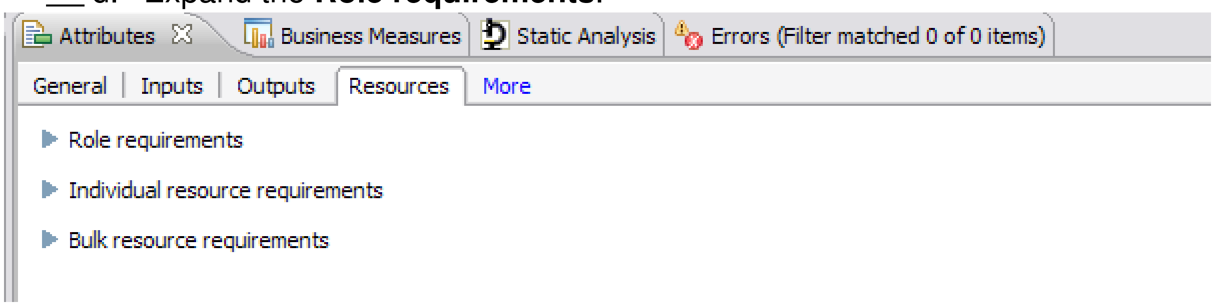
__ 1. Now, you will learn to assign roles and organization units to individual tasks.

__ a. Return to the process editor of the **Fill Staff Request** process.

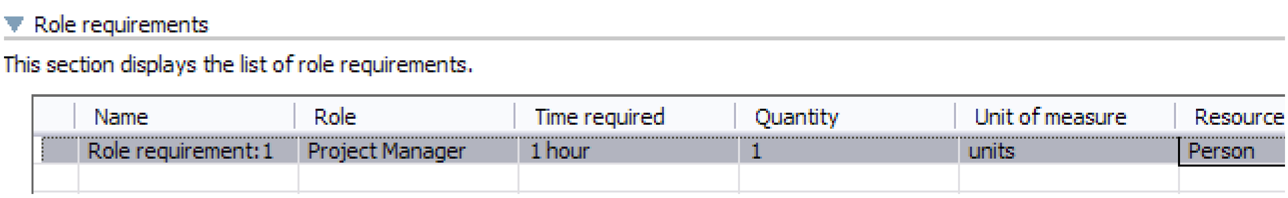
__ b. Select the **Review Staff Request** task.

__ c. In the **Attributes view**, select the **Resources** tab.

__ d. Expand the **Role requirements**.

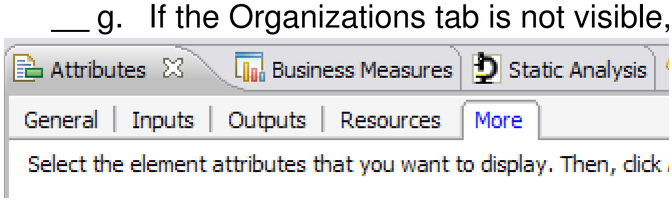


__ e. In the **Role requirements** section, click **Add** and enter the following information:

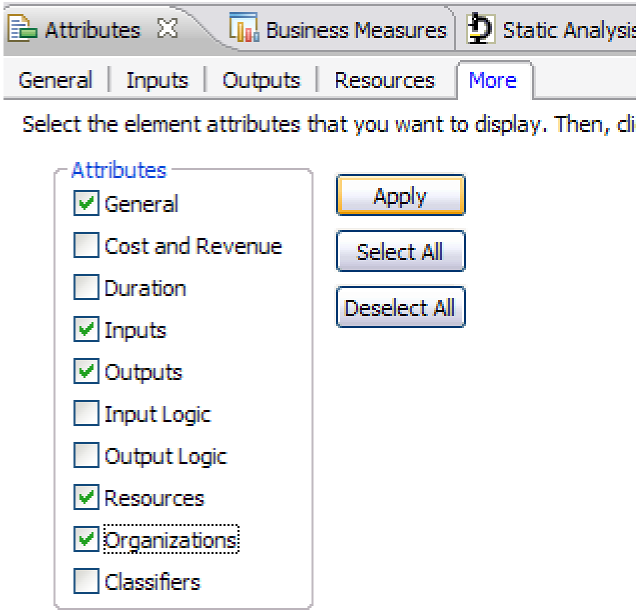


__ f. Select the **Organizations** tab, which is located next to the **Resources** tab.

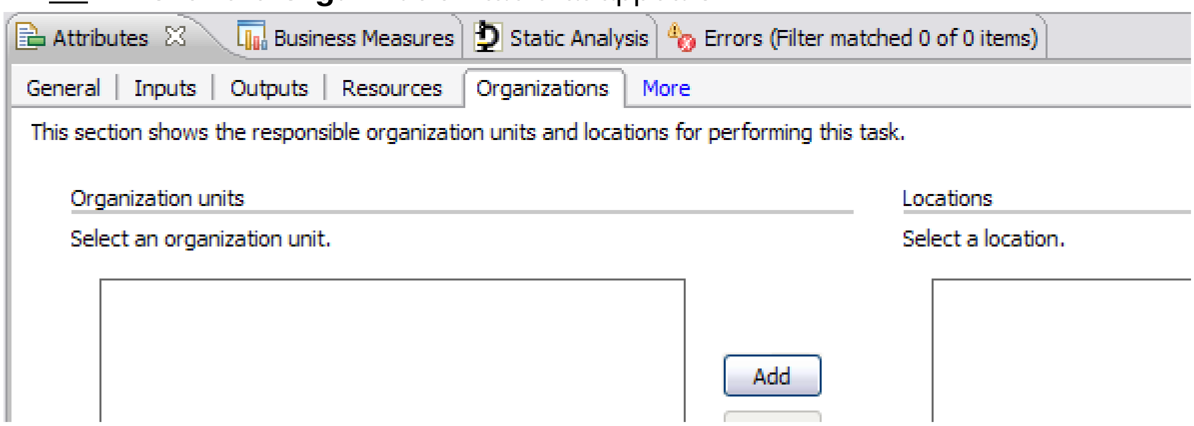
__ g. If the Organizations tab is not visible, click **More**.



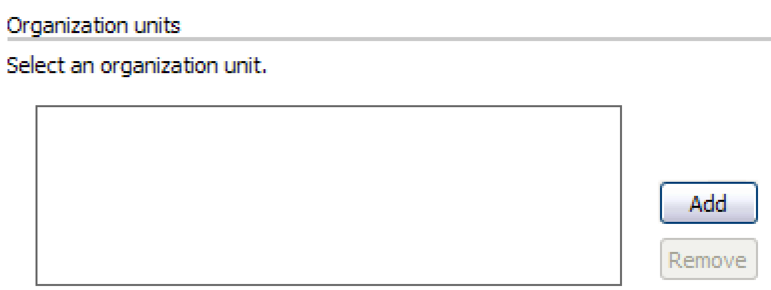
__ h. Select the check box next to Organizations, and then click **Apply**.



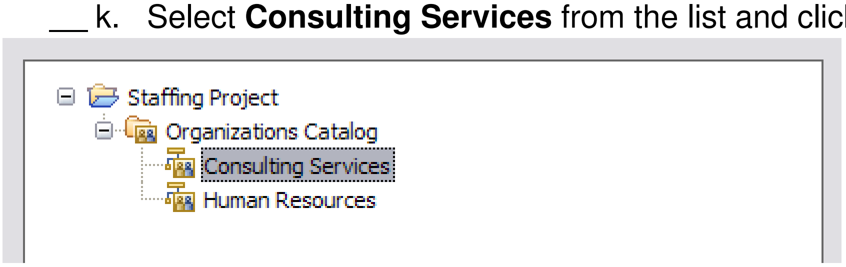
__ i. Click the **Organization** tab that appears.



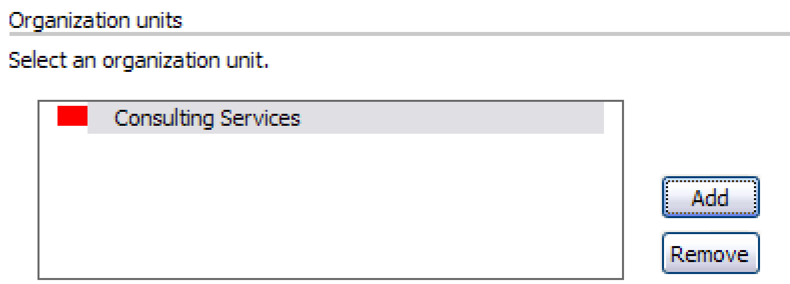
__ j. Under **Organization units**, click **Add**.



__ k. Select **Consulting Services** from the list and click **OK**.



The **Consulting Services** organization unit is now added to the **Review Staff Request** task.



You have just completed the role requirement and added the organization unit for the **Review Staff Request** task.

__ 2. Define the role requirement for each of the remaining tasks in the table below in the same manner:

Task	Role	Time required	Qty	Unit of measure-ment	Resource definition	Organiza-tion unit
Check consultant availability	Resource manager	30 min	1	Units	Person	Human Resources
Assign team	Project manager	30 min	1	Units	Person	Consulting Services
Change assignment	Resource manager	30 min	1	Units	Person	Human Resources
Contact customer	Project manager	1 hour	1	Units	Person	Consulting Services
Schedule future assignment	Resource manager	30 min	1	Units	Person	Human Resources
Notify project executive	Project manager	15 min	1	Units	Person	Consulting Services
Notify employee	Resource manager	15 min	1	Units	Person	Human Resources

__ 3. Save your work (Ctrl+S).

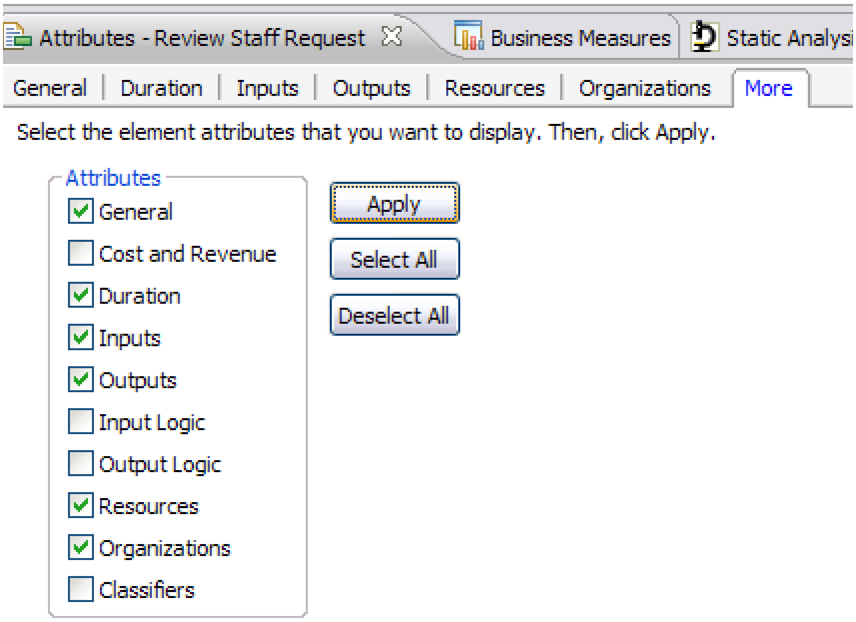
Part 8: Defining task durations

In this section, you will be allocating the amount of time required to complete each task. Although you allocated resources to each task within the process model, the time taken to perform a task is not necessarily the same as the time for which the resource is allocated.

__ 1. In order to allocate time required for each task, do the following:

__ a. Within the **process editor** for the **Fill Staff Request** process, select the **Review Staff Request** task.

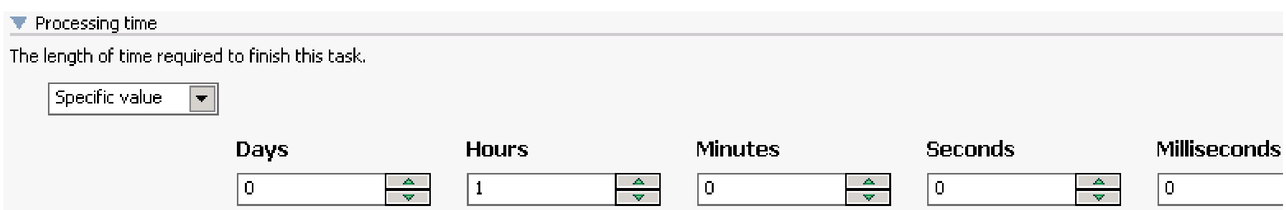
__ b. From the **Attributes** pane, select the **Duration** tab. If the tab is not visible, select **More**, click the check box next to **Duration**, and click **Apply**.



__ c. Expand the **Processing Time** section.

__ d. Enter `1` hour under **Processing time**.

Note that `Specific value` is now selected automatically.



__ 2. Similarly, change the processing times of the other tasks:

Check Consultant Availability: `45 minutes`

Assign Team: `30 minutes`

Change Assignment: `1 hour`

Contact Customer: `2 hours`

Schedule Future Assignment: `30 minutes`

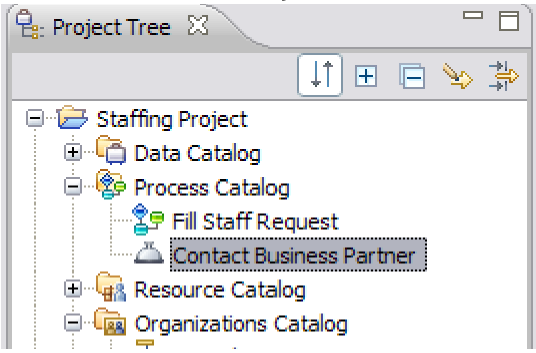
Notify Project Executive: `1 hour`

Notify Employee: `30 minutes`

Decisions and merge elements do not have durations.

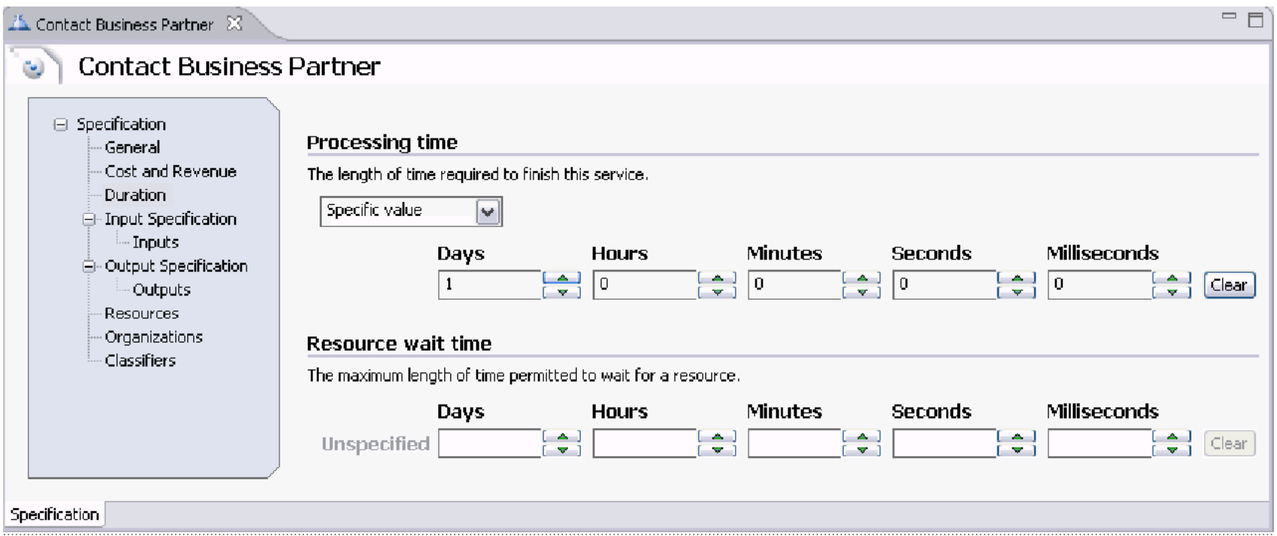
__ 3. You will also need to define the duration for services called **Contact Business Partner**.

__ a. Double-click the **Contact Business Partner** services under the Process Catalog in the Project Tree.



__ b. In the service editor, select **Duration**.

__ c. Under **Processing time**, enter `1 day`.



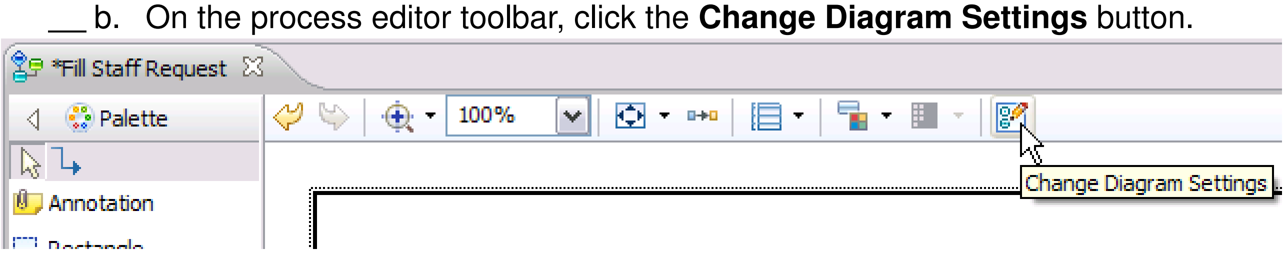
__ 4. Save your work (Ctrl+S) and close the Contact Business Partner editor.

Part 9: Adding labels to the diagram

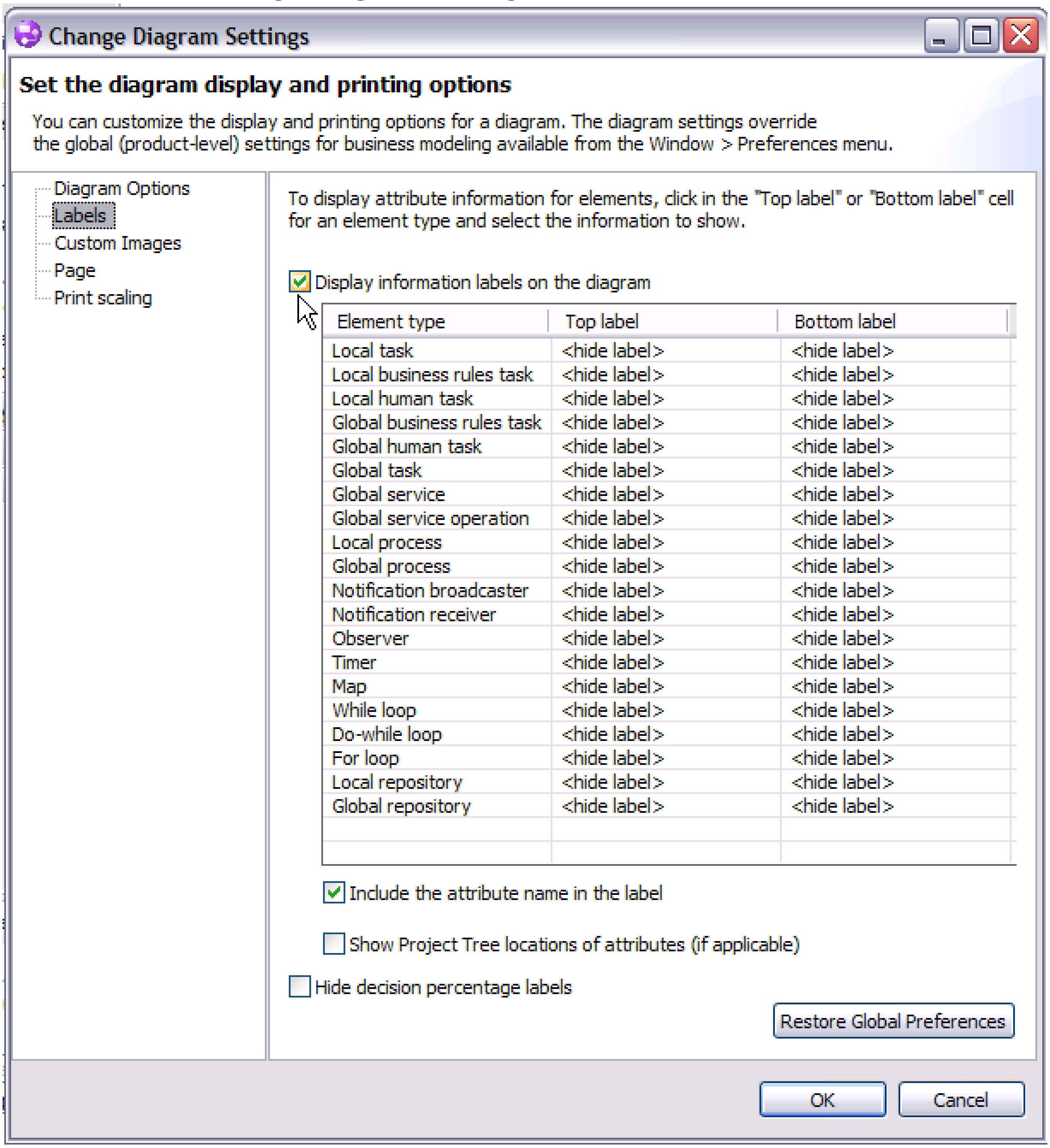
__ 1. In this next section, you will learn to add labels to your diagram. Having these labels makes it easier to understand your model at a glance. To start creating these labels, do the following:

__ a. Double-click the **Fill Staff Request** process from the **Project Tree**, if it is not already open.

__ b. On the process editor toolbar, click the **Change Diagram Settings** button.



__ c. In the **Change Diagram Settings** window, click **Labels**.



__ d. Check the box next to **Display information labels on the diagram**.

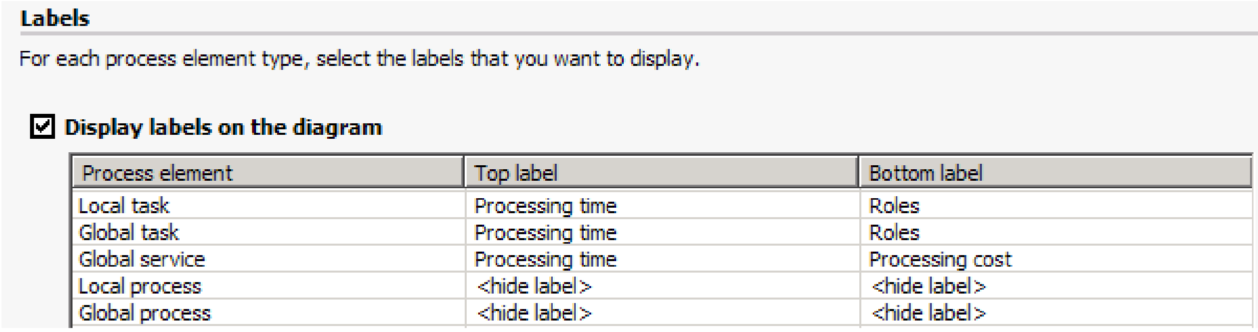
__ 2. In order to define what you want to show as a label, do the following:

__ a. In the row labeled **Local task**, double-click the cell under **Top label** and select **Processing time** from the drop-down menu.

__ b. Assign **Roles** as the bottom label for **Local task**.

__ c. Repeat the previous two steps for the **Global task.**

__ d. Assign Processing time and Processing cost for **Global service**.



Labels

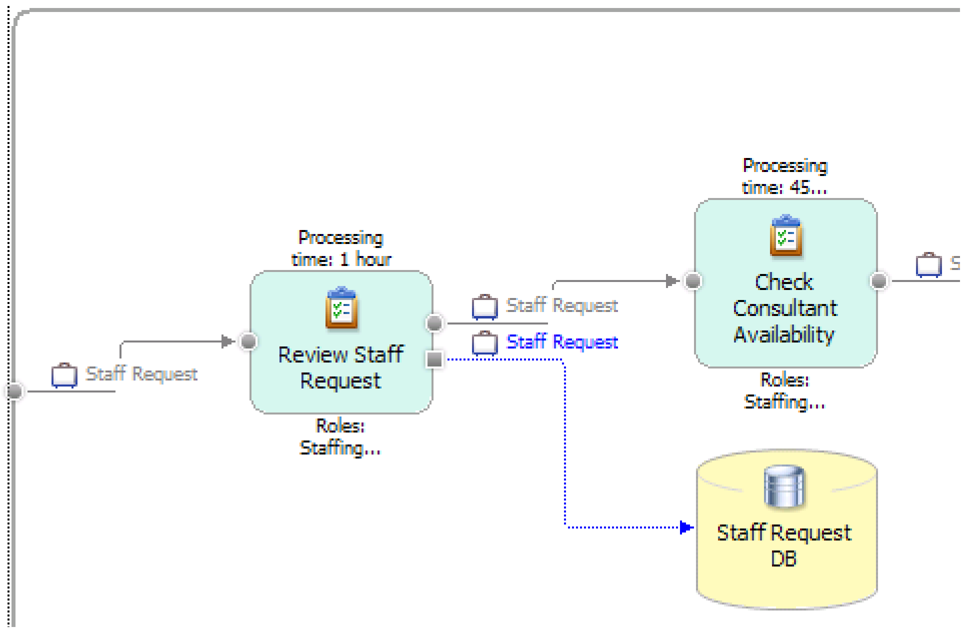
For each process element type, select the labels that you want to display.

☑ **Display labels on the diagram**

Process element	Top label	Bottom label
Local task	Processing time	Roles
Global task	Processing time	Roles
Global service	Processing time	Processing cost
Local process	<hide label>	<hide label>
Global process	<hide label>	<hide label>

__ e. Click **OK** to return to the process diagram.

__ f. Note that the labels above and below each task now have values:



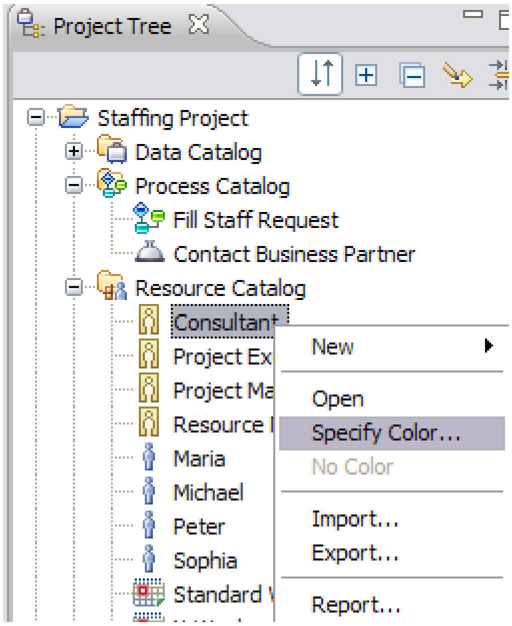
__ 3. Save the process (Ctrl+S).

Part 10: Associating colors with roles

You can specify a color when you create roles, organization units, and so on, and you can also specify or change the color from the Project Tree. In this section, you will be associating roles with colors. Color coding in this fashion helps you see at a glance how many tasks each role performs.

__ 1. Specify a color for the **Consultant** position.

__ a. From the Project Tree, under **Resource Catalog**, right-click **Consultant** and select **Specify Color**.



The **Color** window appears.

__ b. Select a **Yellow** color and click **OK**.

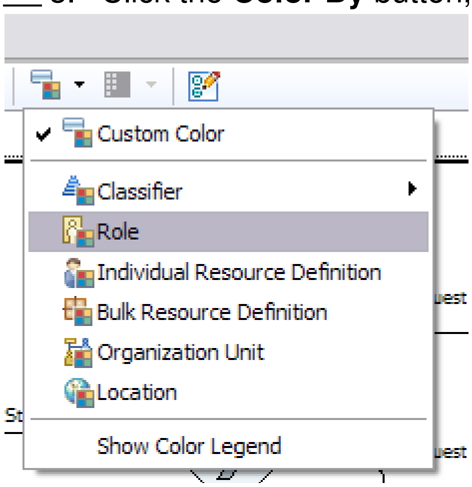
__ 2. Similarly, perform the above steps to associate colors with the following roles:

Project executive: purple

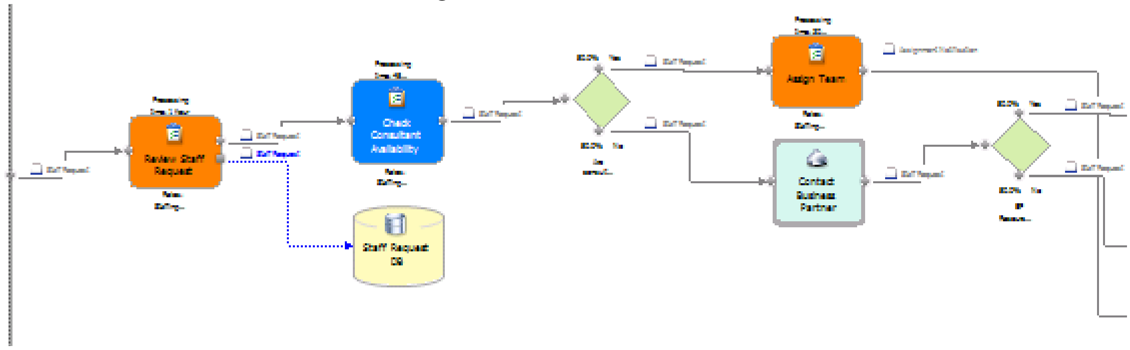
Project manager: orange

Resource manager: blue

__ 3. Click the **Color By** button, located on the top heading of the editor, and select **Role**.



Tasks are now color-coded according to their associated roles.



Note

If there are multiple roles assigned to a task, only the color of first role assigned will be displayed.

__ 4. Turn off color-coding by clicking **Color By** button, and selecting **Custom Color**.

__ 5. Close all editors.

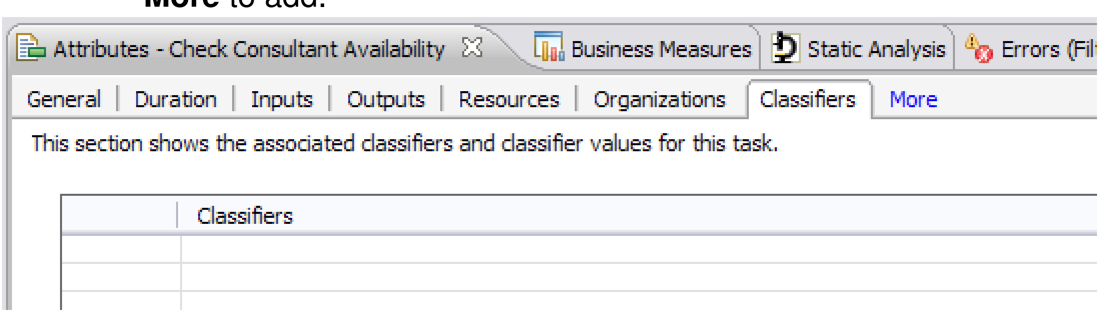
Part 11: Assigning classifiers

Classifiers enable the user to categorize tasks and other process elements for decision-making or process optimization. Predefined classifiers are provided for quality-control, value added, and workflow. Custom classifiers can also be defined.

__ 1. Here, you will learn how to add a new classifier called `Customer Impact`.

__ a. From the **Fill Staff Request** process editor, select the **Check Consultant Availability** task.

__ b. In the **Attributes** pane, click the **Classifiers** tab. If you do not see the tab, click **More** to add.

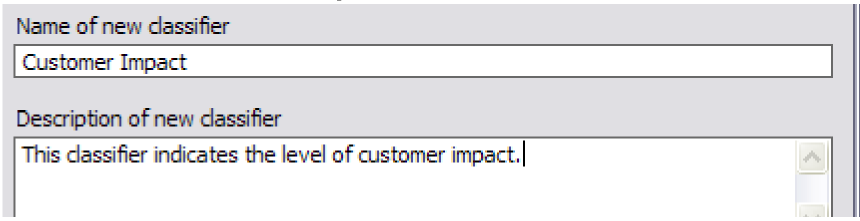


__ c. Click **Add**.

__ d. In the **Select a new classifier value** window, click **New Classifier**.

__ e. Enter `Customer Impact` as **Name of new classifier**.

__ f. Enter **`“This classifier indicates the level of customer impact.”`** under **Description of new classifier.**



__ g. Click **Finish**.

__ 2. Now, add a classifier value called **`Low`**.

__ a. In the **Select a new classifier value** window, click **New Classifier Value**.

__ b. Enter **`Low`** as **Name of new classifier value**.

__ c. Enter **`Low customer impact`** as **Description of new classifier value.**

__ d. Do not check **Open editor when finished** box.

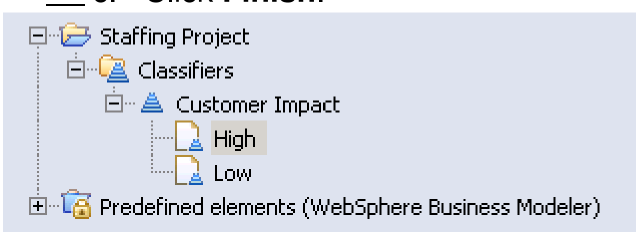
__ e. Click **Finish**.

__ 3. In the same fashion, create a new classifier value called **`High`**.

__ a. Enter **`High`** as **Name of new classifier value**.

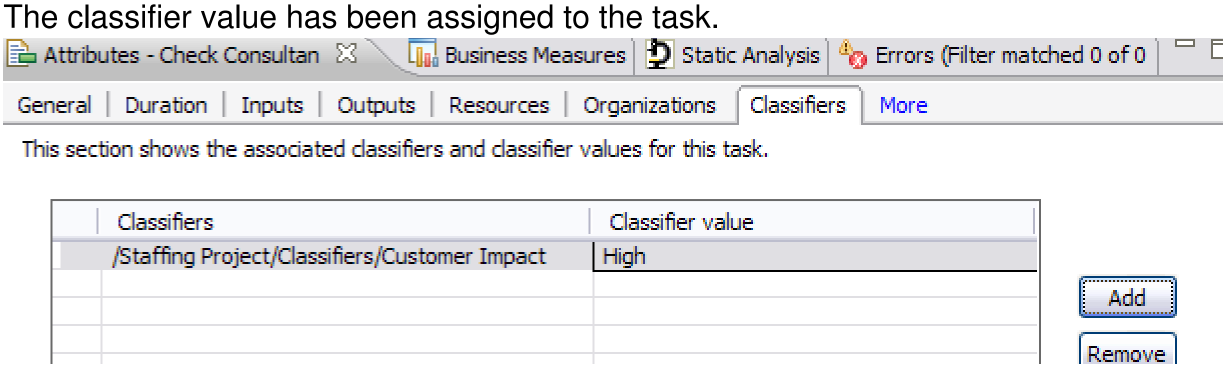
__ b. Enter **`High customer impact`** as **Description of new classifier value.**

__ c. Click **Finish**.

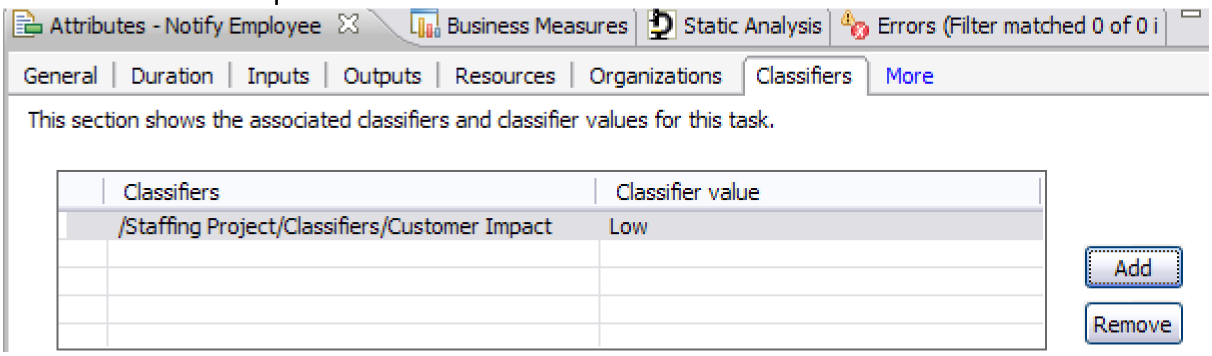


__ d. Click **OK**.

The classifier value has been assigned to the task.



__ 4. Repeat the previous steps to add a classifier to the **Notify Employee** task; it has low customer impact.



__ 5. Assign classifier values to the following tasks:

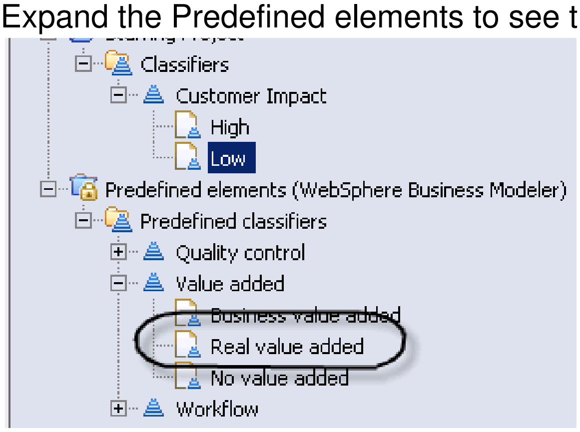
Review Staff Request: **`Real value added`**

Schedule Future Assignment: **`Real value added`**

Notify Project Executive: **`High customer impact`**

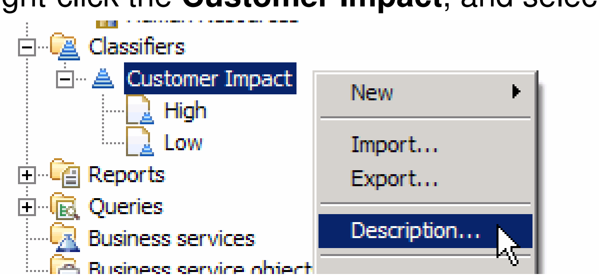
Note

Expand the Predefined elements to see the default classifiers.

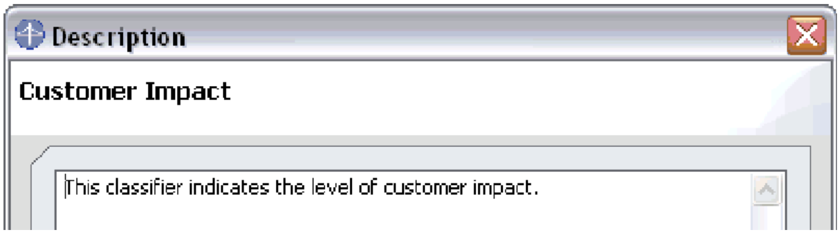


__ 6. To verify the description of the user defined classifier, select **Staffing Project > Classifiers > Customer Impact** from the Project Tree.

__ 7. Right-click the **Customer Impact**, and select **Description**.



The description of the classifier displays.



__ 8. Save changes (Ctrl+S).

Part 12: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. What are the definitions of roles and resources?

____

__ 2. What is the definition of classifier?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 5. Completing the process model

Estimated time

00:30

What this exercise is about

This exercise covers completing the process model.

What you should be able to do

At the end of the exercise, you should be able to:

- Define decision expressions
- Convert local elements to global elements
- Switch to the swimlane layout
- Add URLs to descriptions
- Attach files to processes
- Use search and “used by” functions

Exercise instructions

In this lab, you will define decision expression, convert local elements to global elements, work with the process diagram in swimlane format, and add URL links to description fields.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace: **`C:\workspaces\Lab5_workspace`**

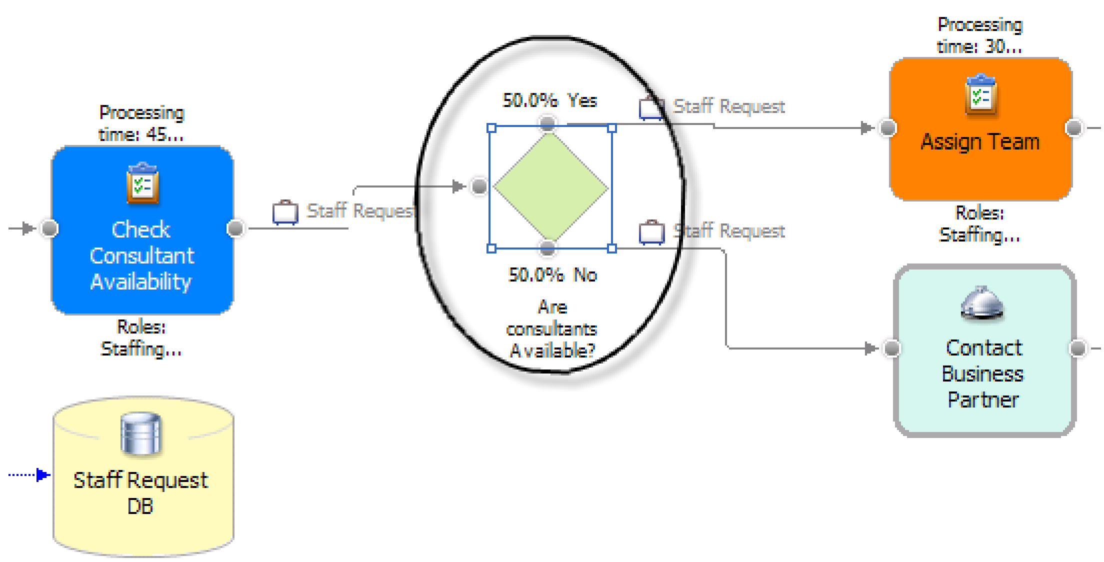
Part 2: Defining decision expressions

__ 1. Make sure that you are working in the **Advanced** mode by clicking **Modeling > Mode > Advance.**

__ 2. Open the **Fill Staff Request** process from the Project Tree.

__ 3. Modify the output branches for the **Are Consultants Available?** decision such that the Probability (%) of Yes is **`70`** and the Probability (%) of No is **`30`**.

__ a. Select the **Are Consultants Available?** decision in the process diagram.



__ b. In the **Attributes - Are Consultants Available?** view, select the **Output branches** tab.

You will see Yes and No output branches.

Output branches

This section shows the output branches for this decision.

Name	Contents	Condition	Probability (%)	
Yes	Output	Yes	50.0	
No	Output:2	No	50.0	

__ c. Change the value of Probability (%) to **70** for Yes.

__ d. Change the value of Probability (%) to **30** for No.

Name	Contents	Condition	Probability (%)
Yes	Output	Yes	70.0
No	Output:2	No	30.0

__ e. All the probabilities must be sum to 100% or you will get an error in the Errors tab.

__ f. Select the row with condition **Yes**.

Name	Contents	Condition	Probability (%)
Yes	Output	Yes	70.0
No	Output:2	No	30.0

__ 4. Now, you will use **Expression Builder** to define an expression for this decision.

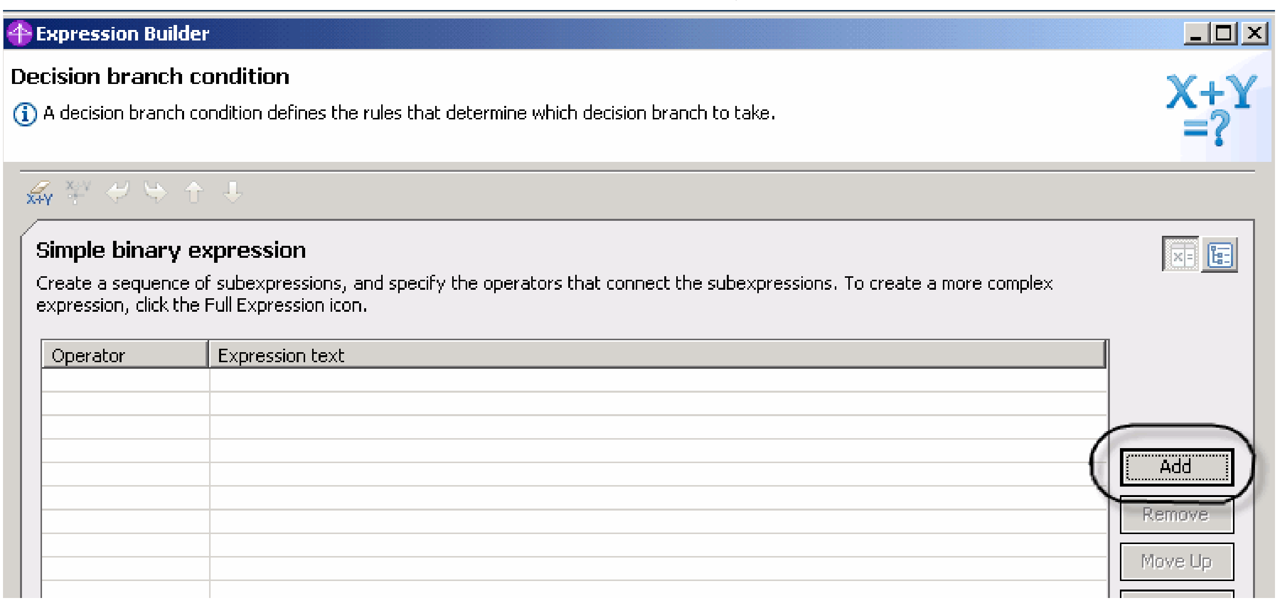
__ a. Scroll to the bottom of the **Attributes view** pane and click the **Edit** button to open the **Expression Builder**.

Note

If you do not see the **Edit Expression** button, make sure that you are in either the Intermediate or Advanced User Profile.

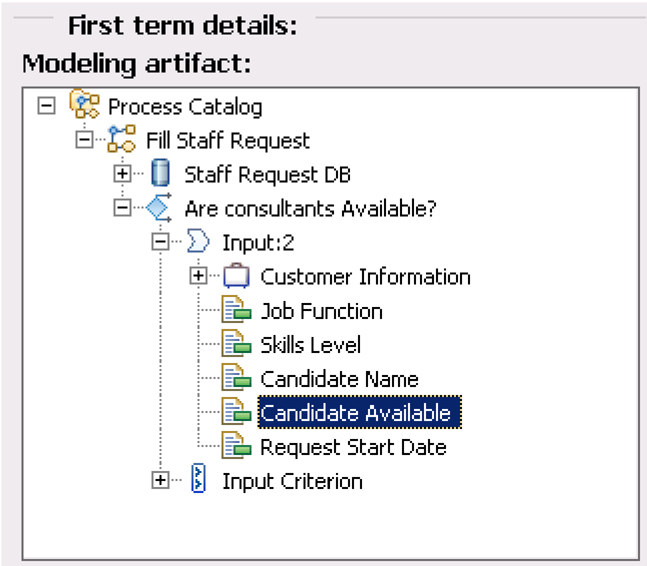
An **Expression builder** window appears.

__ b. Click **Add** button to create a Simple binary expression.

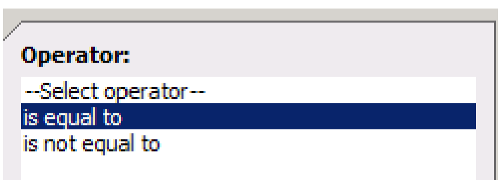


__ c. Verify that **Modeling artifact** is selected under the **First term** field.

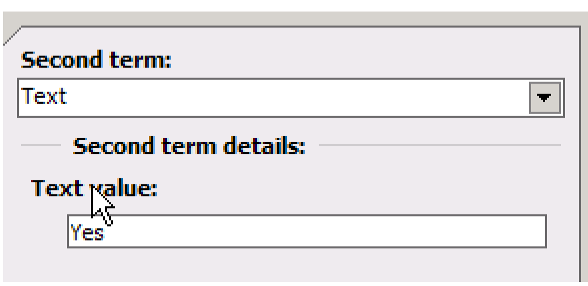
__ d. In the **First term details**, expand the **Process Catalog** > **Fill Staff Request** > **Are consultants available? > Input:2**, and select **Candidate Available.**



__ e. Select **is equal to** under **Operator**.

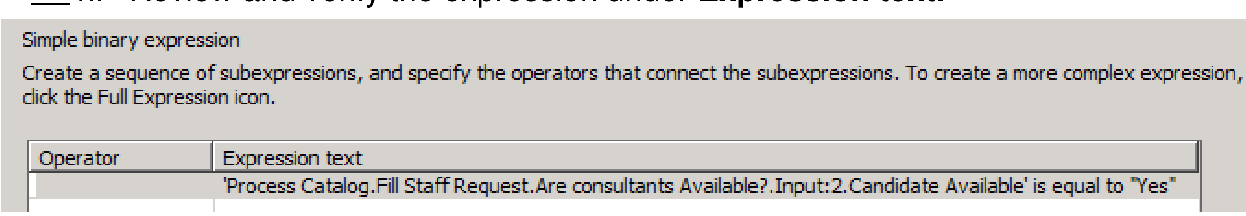


__ f. Select **text** from the **Second term** drop-down list and enter `Yes` as the **Text value**.



__ g. Click **Apply**.

__ h. Review and verify the expression under **Expression text.**



__ i. Click **OK**.

___ j. Since this is a simple decision, you will only need to specify the expression for one of the paths.

___ k. Select the row with condition **No**.

Name	Contents	Condition	Probability (%)
Yes	Output	Yes	70.0
No	Output:2	No	30.0

___ l. Scroll to the bottom to review the expression for "No" and you will see the expression as "... is not equal to Yes."

___ m. Save your work (Ctrl+S).

___ 5. Now, modify the output branches for the **BP Resources Available?** decision such that the Probability (%) of Yes is `90` and the Probability (%) of No is `10`.

___ a. Select the **BP Resources Available?** decision in the process diagram.

___ b. In the **Attributes - BP Resources Available?** view, select the **Output branches** tab.

___ c. You will see Yes and No output branches.

___ d. Change the value of Probability (%) to `90` for Yes.

___ e. Change the value of Probability (%) to `10` for No.

___ f. Select the row with condition **Yes**.

___ 6. Use **Expression Builder** to define an expression for this decision.

___ a. Scroll to the bottom of the **Attributes view** pane and click the **Edit** button to open the **Expression Builder**.

___ b. Click **Add** to create a Simple binary expression.

___ c. Verify that **Modeling artifact** is selected under the **First term** field.

___ d. In the **First term details**, expand the **Process Catalog** > **Fill Staff Request** > **BP Resources available? > Input**, select **Candidate Available.**

___ e. Select **is equal to** under **Operator**.

___ f. Select **text** from the **Second term** drop-down list and enter **`Yes`** as the **Text value**.

___ g. Click **Apply**.

___ h. Review and verify the expression under **Expression text.**

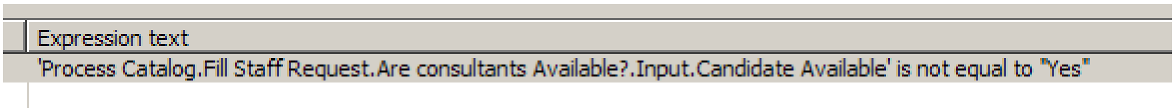
Operator	Expression text
	'Process Catalog.Fill Staff Request.BP Resource Available?.Input.Candidate Available' is equal to "Yes"

___ i. Click **OK**.

__ j. Since this is a simple decision, you will only need to specify the expression for one of the paths.

__ k. Select the row with condition **No**.

__ l. Scroll to the bottom to review the expression for “No” and you will see the following expression.



__ 7. Likewise, modify the output branches for the **Can Customer Wait?** decision such that the Probability (%) of Yes is `90` and the Probability (%) of No is `10`.

__ a. Select the **Can Customer Wait?** decision in the process diagram.

__ b. In the **Attributes - Can Customer Wait?** view, select the **Output branches** tab.

__ c. Change the value of Probability (%) to `90` for Yes.

__ d. Change the value of Probability (%) to `10` for No.

You do not need to define expression for this decision.

__ e. Save your work (Ctrl+S).

__ f. Return to the **Error(Filter matched 0 of 0 items)** and verify that there are no errors.

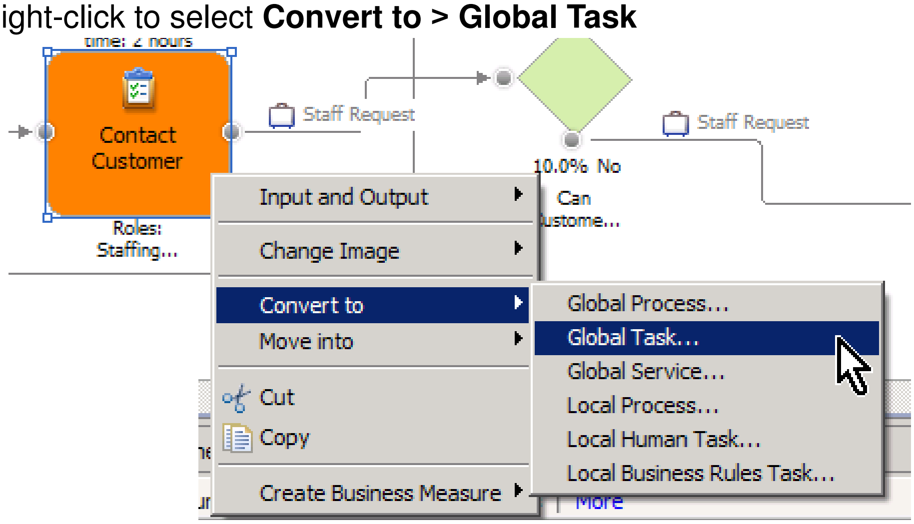
Part 3: Converting local elements to global elements

It is determined that some of the tasks, like **Contact Customer** and **Notify Employee** in this process, should be converted to global tasks which can be reused within the project.

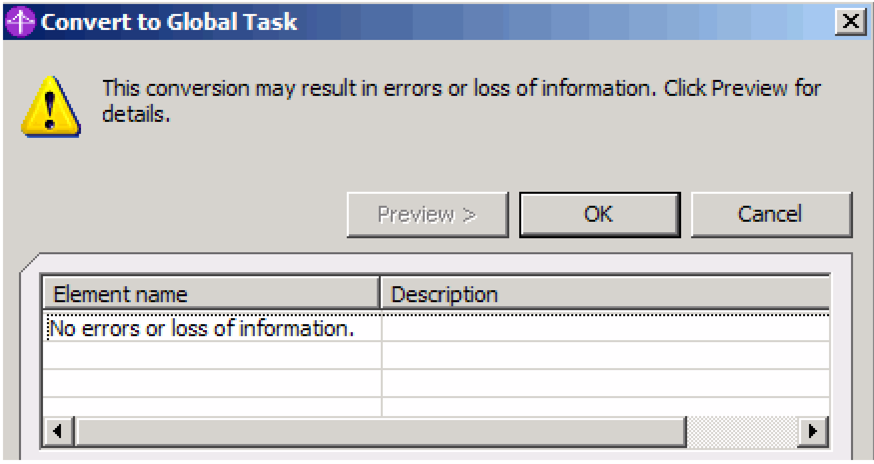
__ 1. Convert **Contact Customer** to a global task.

__ a. Select the **Contact Customer** from the process diagram.

__ b. Right-click to select **Convert to > Global Task**



__ c. Click **Preview** to view the details.

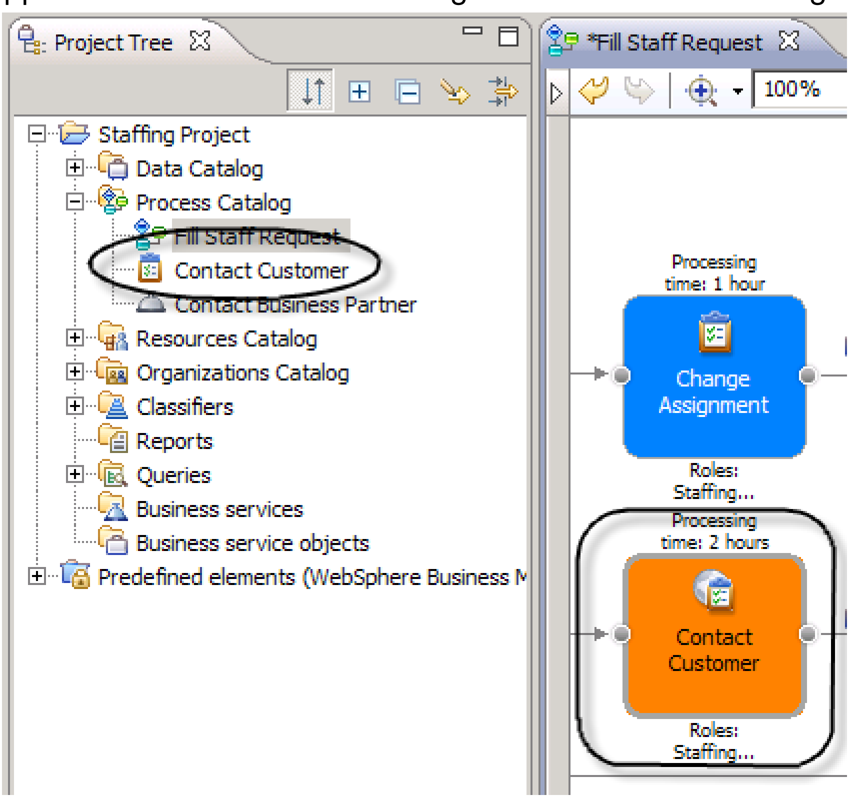


__ d. Click **OK**.

__ e. Make sure that **Process Catalog** is selected.

__ f. Click **Finish**.

Now a global task called Contact Customer appears on your Project Tree and the appearance of the task in the diagram has also been changed.

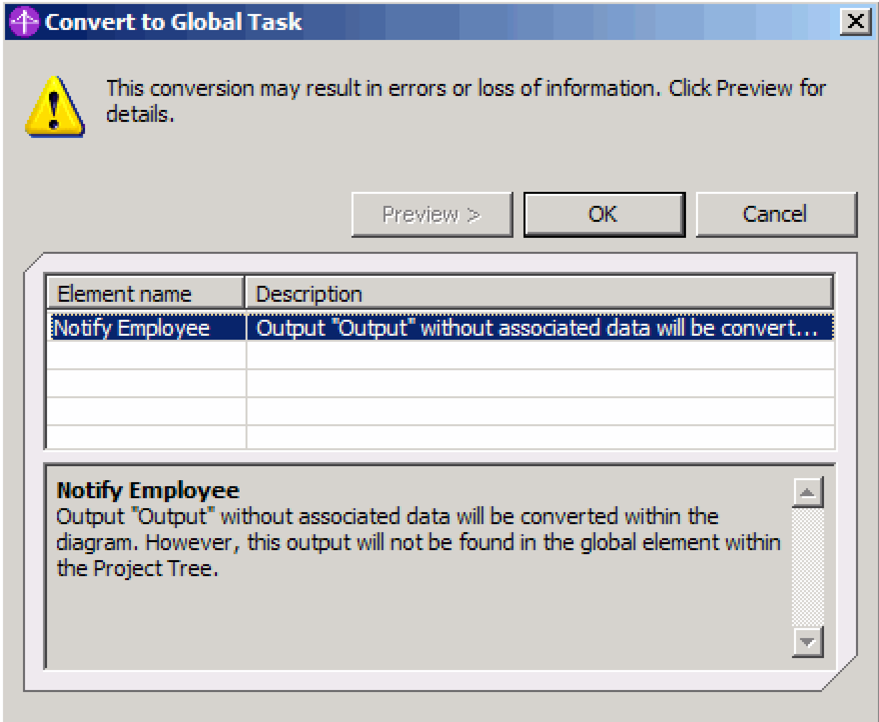


__ 2. In the same way, convert **Notify Employee** to a global task.

__ a. Select the **Notify Employee** from the process diagram.

__ b. Right-click to select **Convert to > Global Task**.

__ c. Click **Preview** to view the details.



Note

When you convert from local to global elements, it may result in errors or loss of information. For example, if you convert local task to global process, you will lose the resource definition.

__ d. Click **OK**.

__ e. Make sure that **Process Catalog** is selected.

__ f. Click **Finish**.

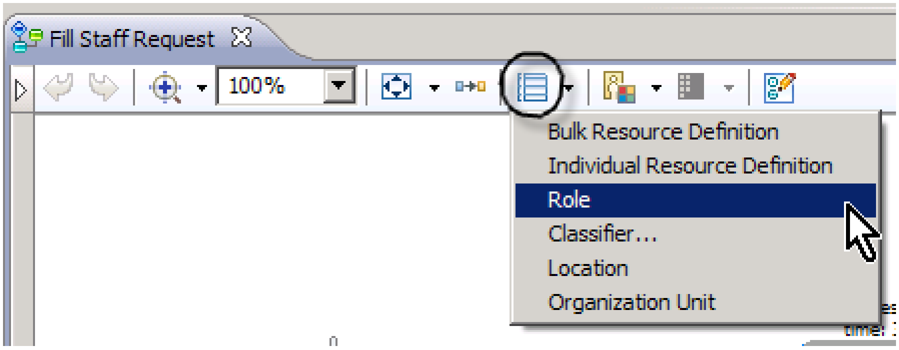
Now both the **Contact Customer** and **Notify Employee** appear on your Project Tree and the appearance of the global task in the diagram has also been changed.

__ g. Save your work (Ctrl+S).

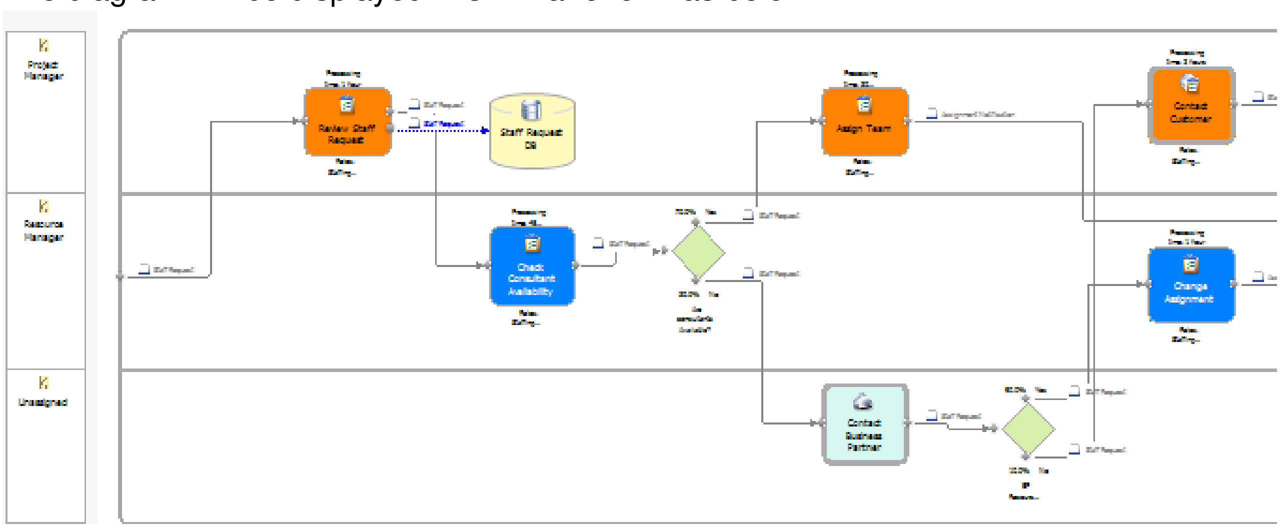
Part 4: Switching to swimlane layout

__ 1. Open the **Fill Staff Request** process from the Project Tree if not already open.

__ 2. From the process editor tool bar, click the **Switch to Swimlane Layout**, and select **Role**.



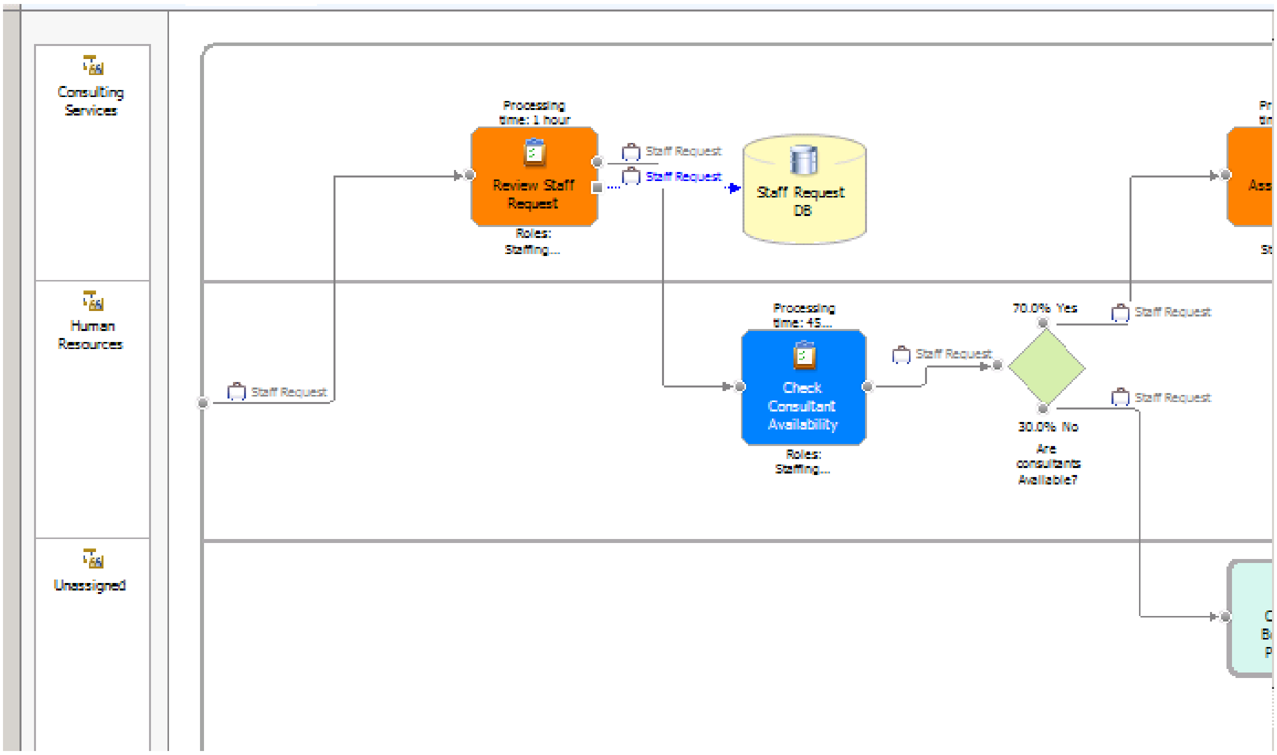
The diagram will be displayed in swimlane form as below:



You can also display by organization units.

__ 3. click the **Switch to Swimlane Layout**, and select **Organization Unit**.

The diagram will be displayed in swimlane form as below:

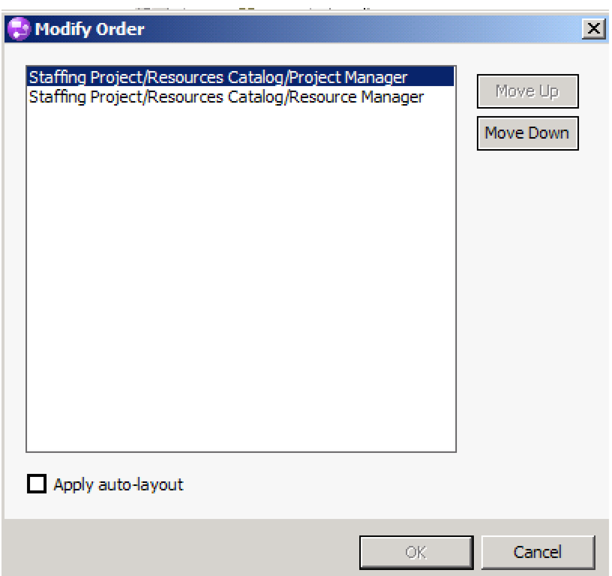


__ 4. Switch back to the swimlane layout by roles.

  __ a. You can change the order of the swimlanes.

  __ b. Right-click the background of the diagram, and select **Change Swimlane Order**.

The **Modify Order** window displays.



  __ c. Select **Resource Manager** from the list.

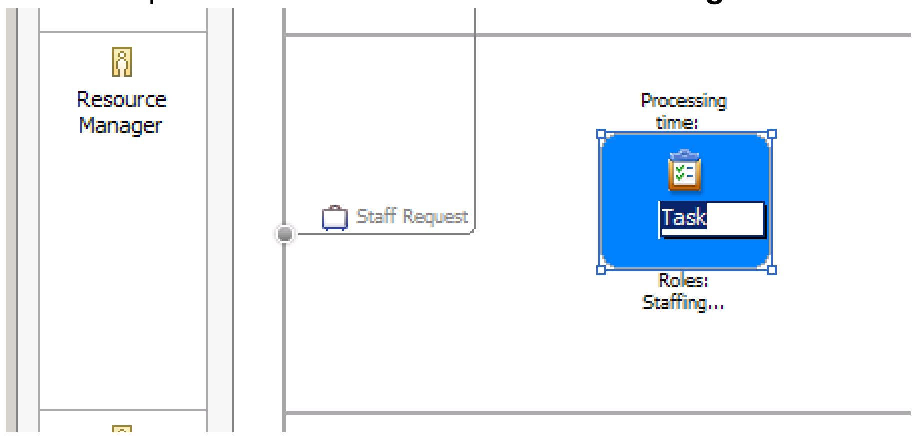
  __ d. Click **Move Up** to move the Resource Manager to the top of the list.

__ e. Click **OK**.

Now the Consultant swimlane will be displayed on the top.

__ 5. Now you will add a new task called **Identify Qualified Resources** to the diagram, and this task will be performed by the **Resource Manager** role.

__ a. Click and drop a local task onto the **Resource Manager** swimlane as below:

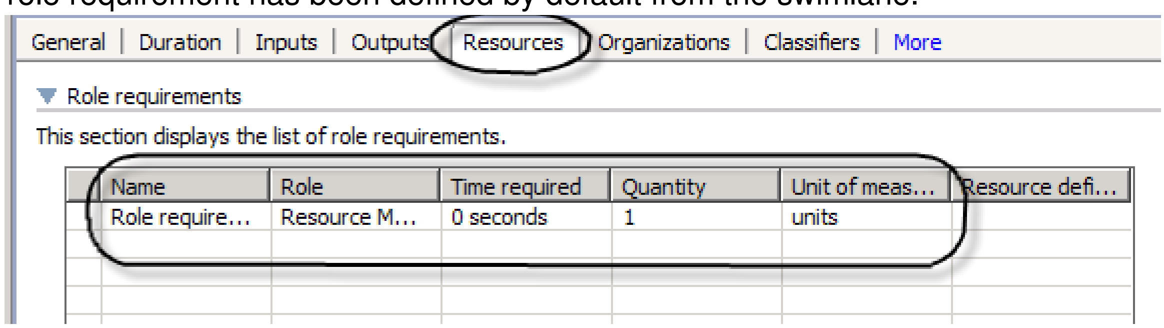


__ b. Name the task `Identify Qualified Resources`.

__ c. When in swimlane form, the resource definition for the task will be automatically assigned to the associated resource requirement.

__ d. Click the **Resources** tab in the **Attributes** pane.

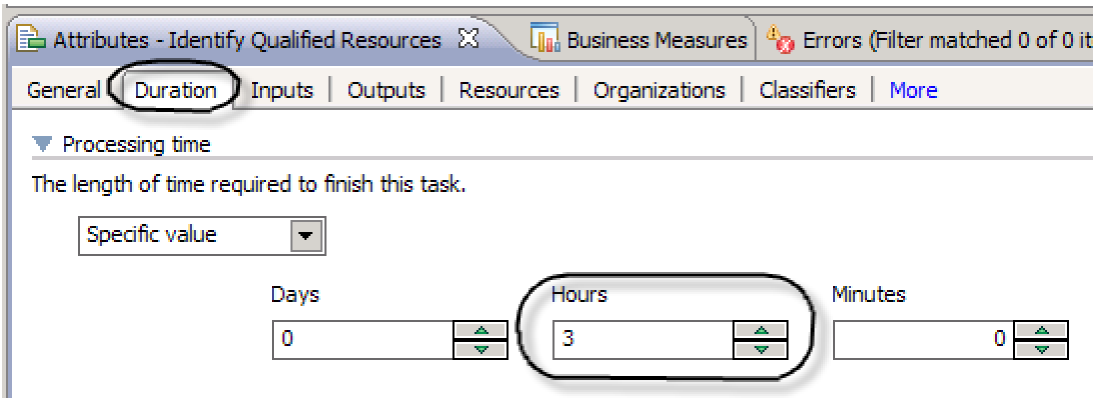
The role requirement has been defined by default from the swimlane.



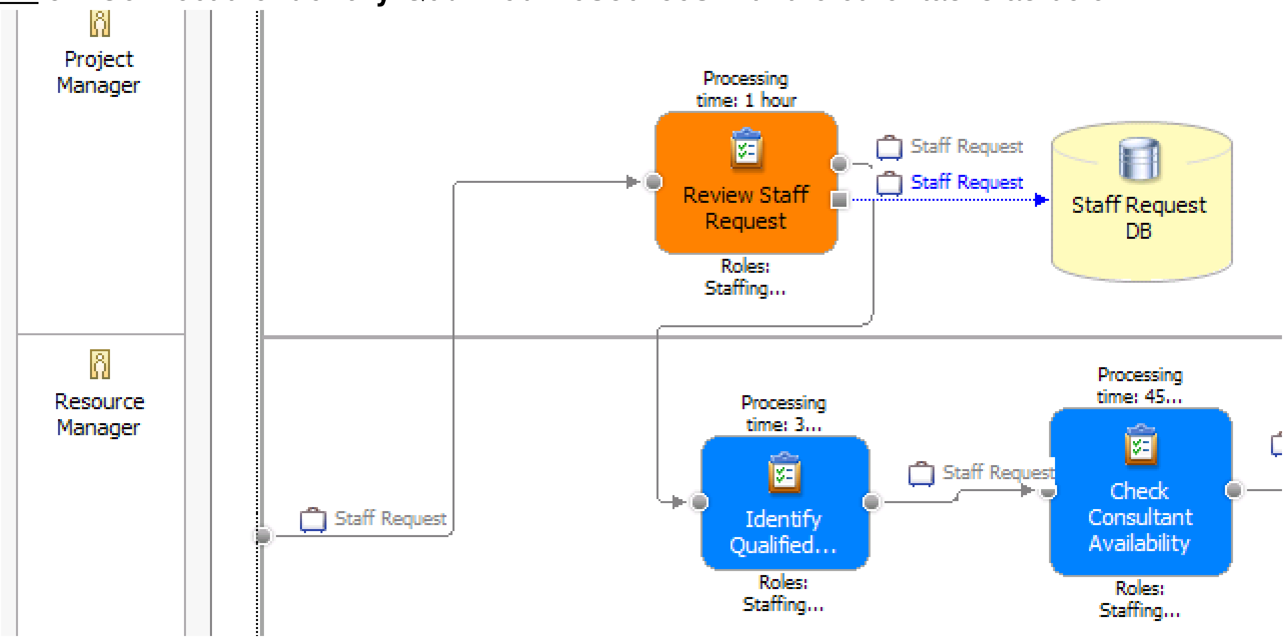
__ 6. Enter the following information for the role requirement:

Name	Role	Time required	Quantity	Unit of measure	Resource definition
Role requirement:1	Resource Manager	2 hours	1	units	Person

__ 7. Select the **Duration** tab and enter the following information:



__ 8. Connect the **Identify Qualified Resources** with the other tasks as below:



__ 9. From the process editor tool bar, click the **Switch to Swimlane Layout**, and select **Switch to Free-Form Layout.**

__ 10. Click **Yes** to save the changes.

__ 11. Right-click the background of the diagram, and select **Auto-Layout Left to Right.**

__ 12. Press Crtl+S to save.

Part 5: Adding URL to description

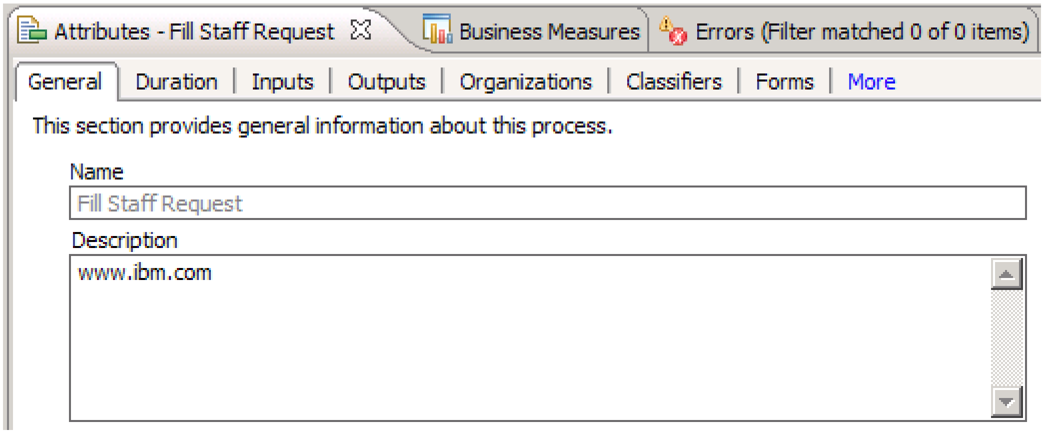
If a description field in an editor or in the Attributes view has a link to a URL or to a file, anyone reading the description can open the link and immediately view the referenced content.

__ 1. Click a white space in the process diagram.

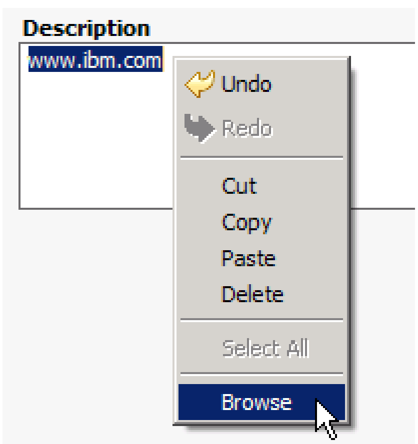
__ 2. In the **Attributes** pane, select the **General** tab.

__ 3. Enter **`www.ibm.com`** in the description field.

Note: The URL must be lower case.



__ 4. To view the link, highlight the text, right-click, and click **Browse**.



A browser opens, and you will be directed to the link you selected. Note that the Internet connection must be available to view the Web site.

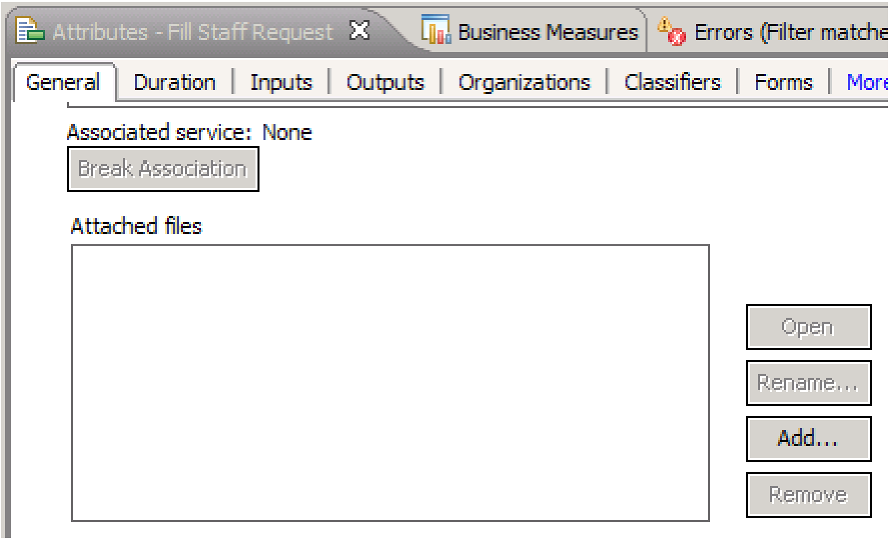
__ 5. Close the browser when you are finished.

__ 6. Save the process (Ctrl+S).

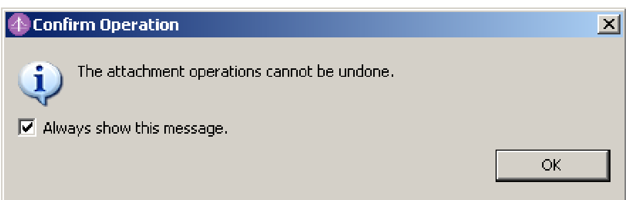
Part 6: Attaching a file to the process

__ 1. In the **Attributes** pane, select the **General** tab.

__ 2. Scroll down to **Attached files**, click the **Add** button.



The **Confirm Operation** dialog box appears.



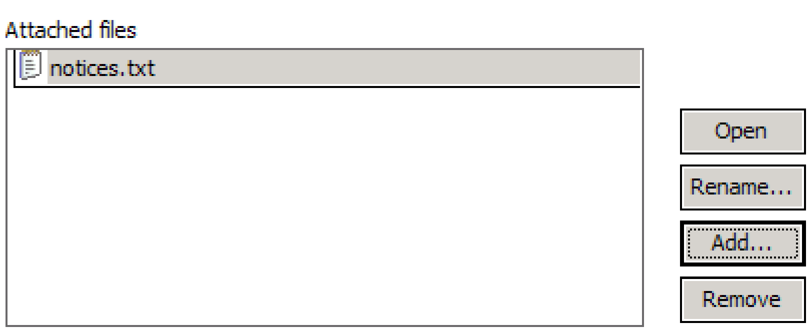
__ 3. Clear the **Always show this message** check box and click **OK**.

The **Choose file** window appears.

__ 4. Navigate to `C:\IBM\WBModeler62\licenses`, and select **notices.txt**.

__ 5. Click **Open**.

__ 6. An entry labeled `notices.txt` appears in the field under **Attached files**.



__ 7. Click **Open**.

The `notices.txt` opens in a text editor.

Note

Files of any format, such as a PDF, Word document or Excel spreadsheet, can be attached.

__ 8. Close the text editor when you are finished.

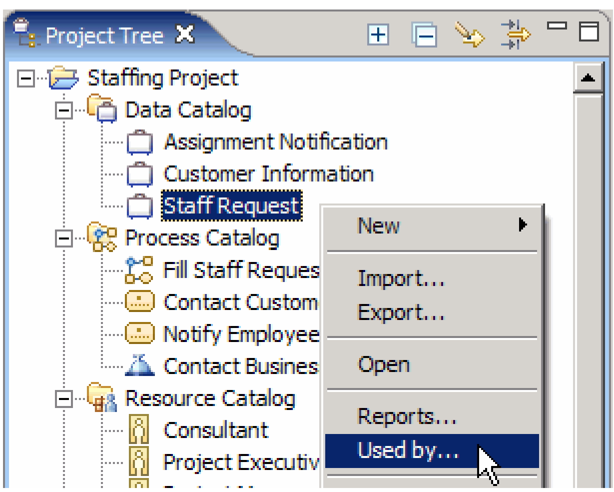
__ 9. Save the changes (Ctrl+S).

__ 10. Select the **Diagram** tab to return to the process diagram.

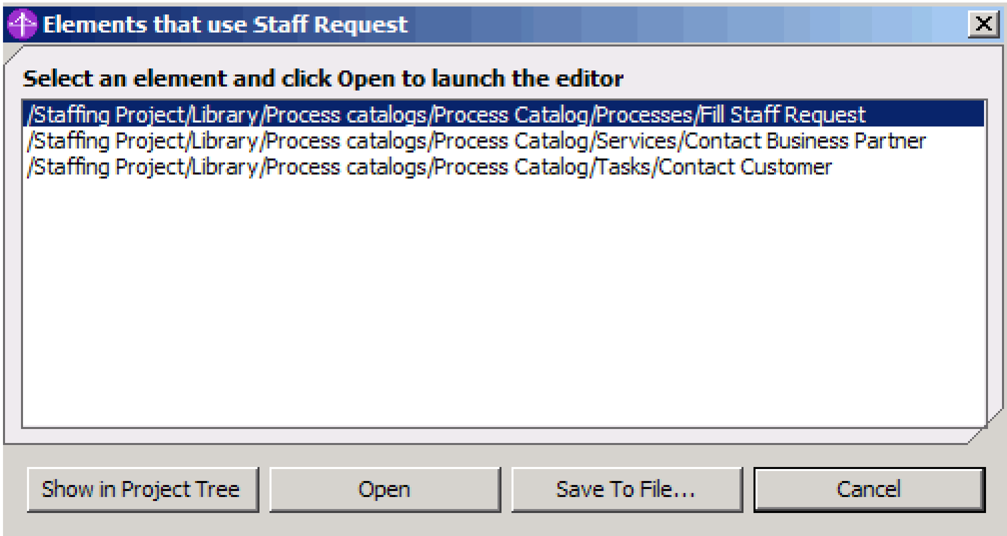
Part 7: Using search and used by functions

You can now review where a global element is used. This function can help you understand how deleting an object will affect the project. This function can also help you to identify where a global element was being used across the project.

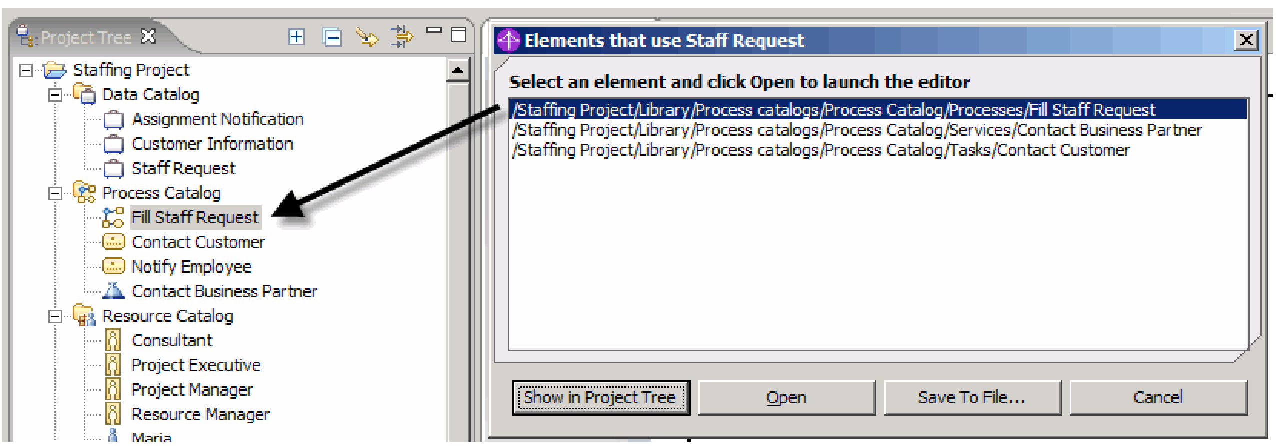
__ 1. To find out where the business item **Staff Request** is used, from the Project Tree, under **Staffing Project > Data Catalog,** right-click **Staff Request** to select **Used by**.



The Used by results will display as follows, and if the **Staff Request** was deleted or modified, then the following business items, tasks, and processes would be affected.



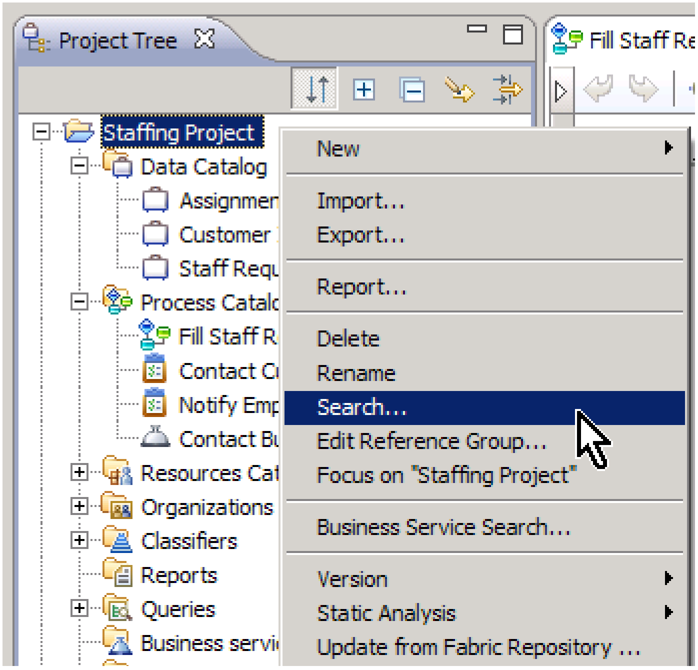
__ 2. Click the **Show in Project Tree** button to locate the process in the Project Tree.



__ 3. Click **Cancel**.

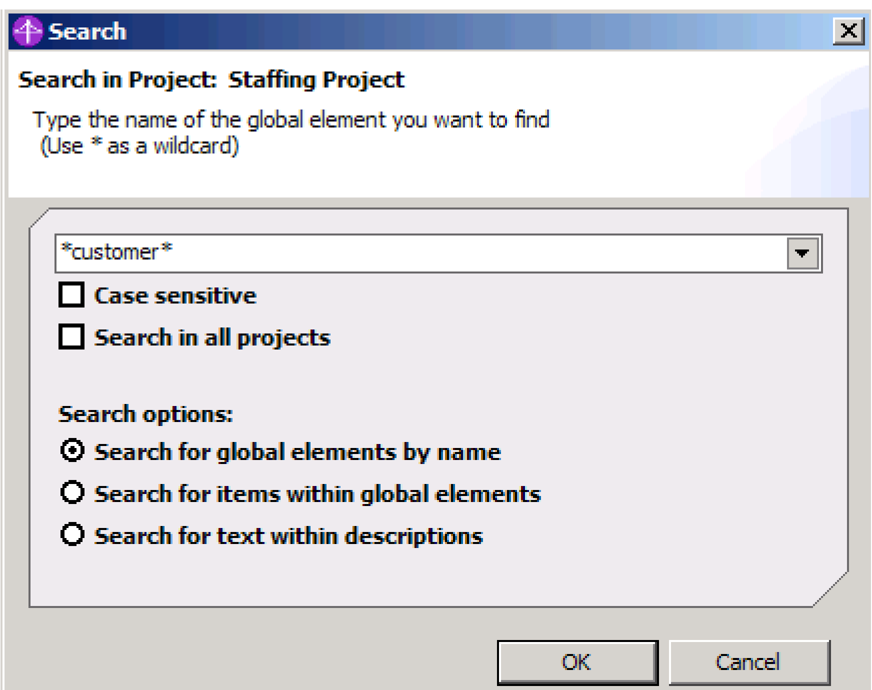
You can search by name for elements in the Project Tree. When carrying out a search, you can use the asterisk (*) as a wildcard character.

__ 4. To search any elements that contain the word “`customer`” within the project, from the Project Tree, select **Staffing Project** and right-click to select **Search**.



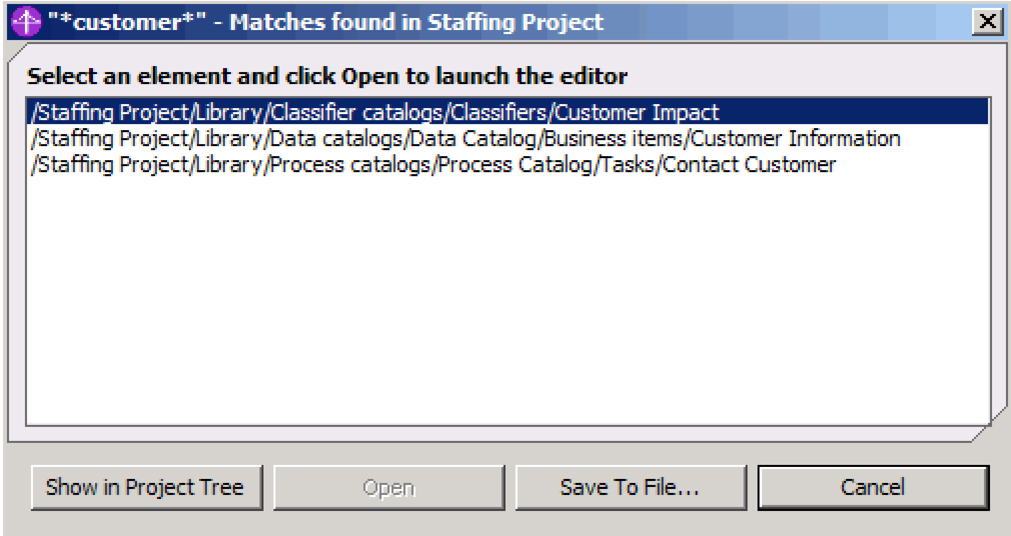
The **Search** window displays.

__ 5. Enter **`*customer*`** as the name to search for, and clear the **Case sensitive** box.



__ 6. Click **OK**.

The search results will display as follows:

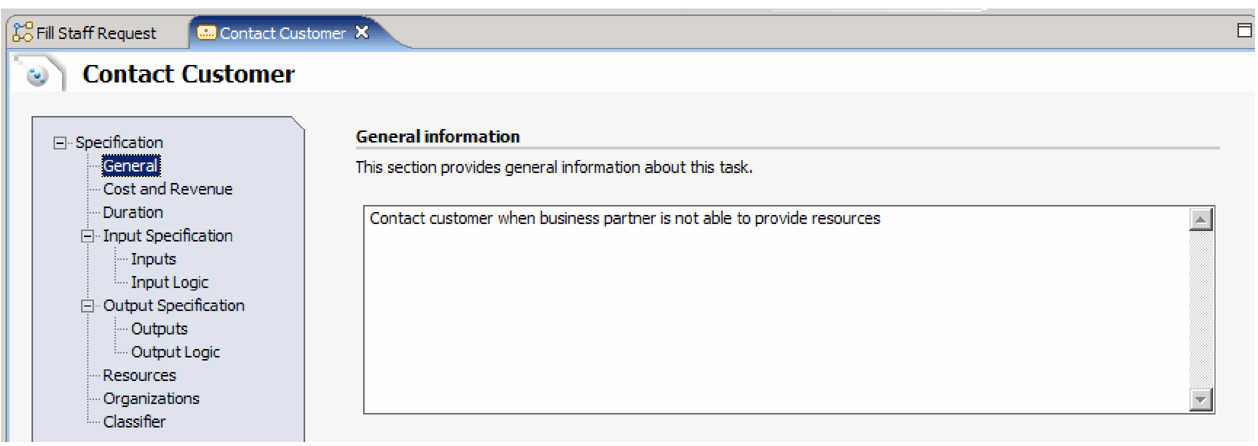


__ 7. Select /**Staffing Project**/**Library**/**Process catalogs**/**Process Catalog**/**Tasks**/**Contact Customer** from the list.

__ 8. Click **Open.**

__ 9. Click **Cancel** to close the search results window.

Now the **Contact Customer** editor displays.



__ 10. Close the **Contact Customer** editor.

__ 11. Save changes (Ctrl+S).

Part 8: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. How do you resize swimlanes in your diagram?

____

__ 2. How do you add an “otherwise” branch to a decision?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 6. Defining human tasks and forms

Estimated time

00:30

What this exercise is about

This exercise covers defining Human Tasks and Forms.

What you should be able to do

At the end of the exercise, you should be able to:

- Create a human task
- Associate forms
- Assign a primary owner
- Define escalations
- Convert a local task to a local human task

Requirements

- IBM Lotus Form Designer V3.5 installed
- IBM Lotus Form Viewer V3.5 installed

Exercise instructions

This lab walks you through the steps to add human tasks to the business process model.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace: **`C:\workspaces\Lab6_workspace`**

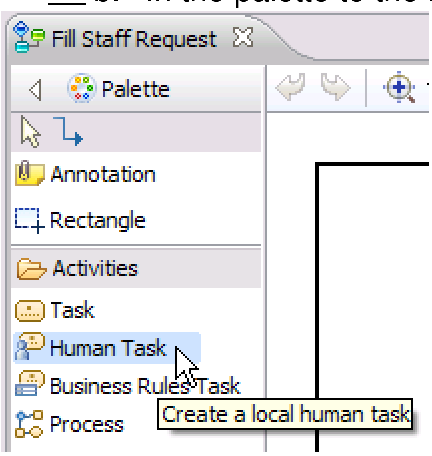
Part 2: Adding a local human task

In this part of the exercise, you will be adding human tasks to the process model.

__ 1. In the **Fill Staff Request** process, add a local human task called **`Update Staff Request Form`**

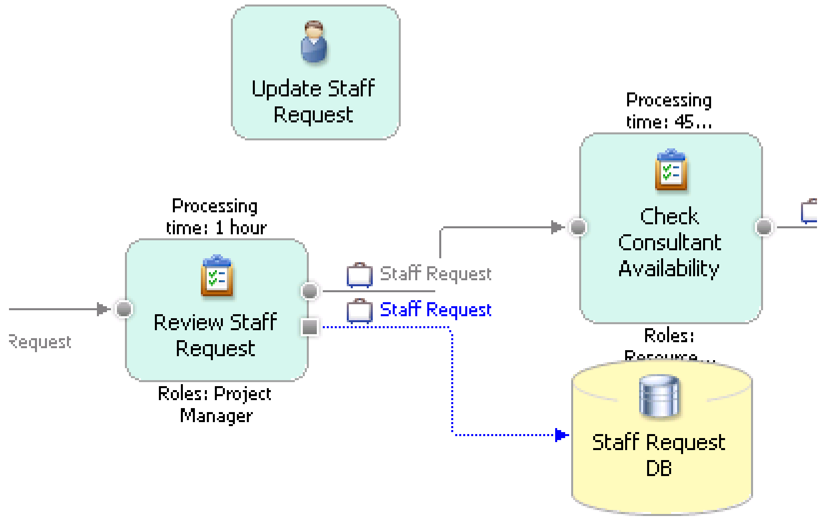
__ a. In the Project Tree, open the Fill Staff Request process by double-clicking **Fill Staff Request** under **Staffing Project > Process Catalog**.

__ b. In the palette to the left of the process diagram, select **Human Task**.

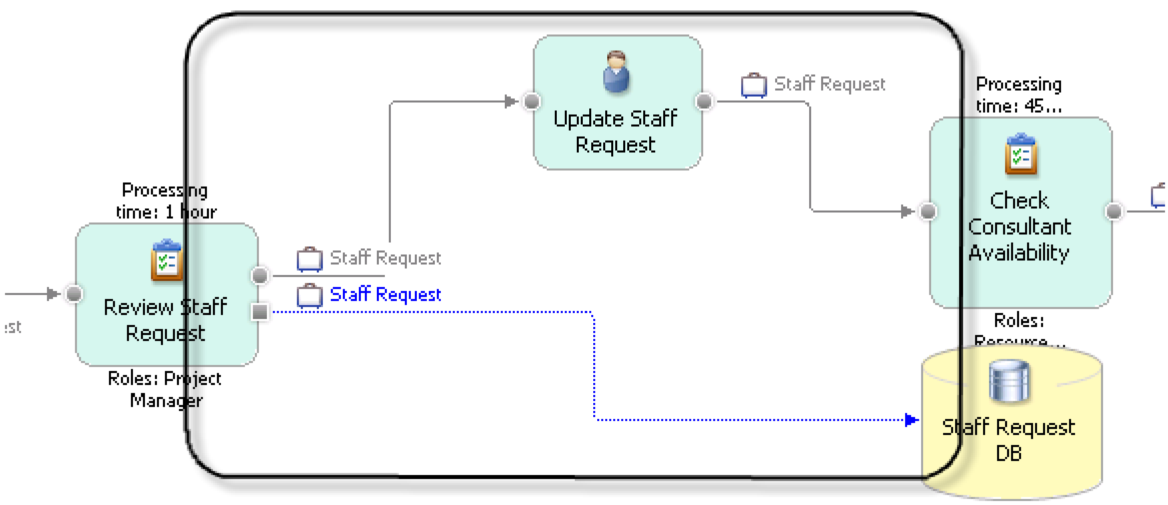


__ c. Drag and drop the task on to the diagram.

__ d. Rename the human task to `Update Staff Request Form` and press **Enter**.



__ 2. Insert the human task into the process flow by following the sub-steps outlined below.
This human task should be placed between **Review Staff Request** and **Check Consultant Availability**.



__ a. In order to place the human task in the desired location, insert additional space by right-clicking in the area between the **Review Staff Request** and **Check Consultant Availability** tasks and selecting **Insert Space> Horizontal** from the context menu.

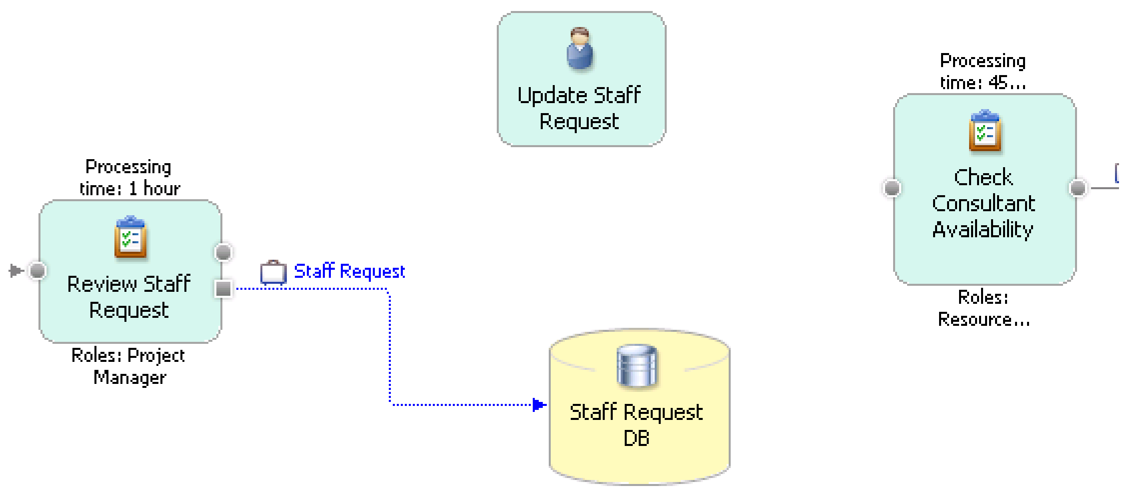
Note

Do not confuse this with the **Increase Horizontally** option. Selecting **Increase Horizontally** will increase the horizontal size of the diagram itself by adding white space to the right side of the diagram.

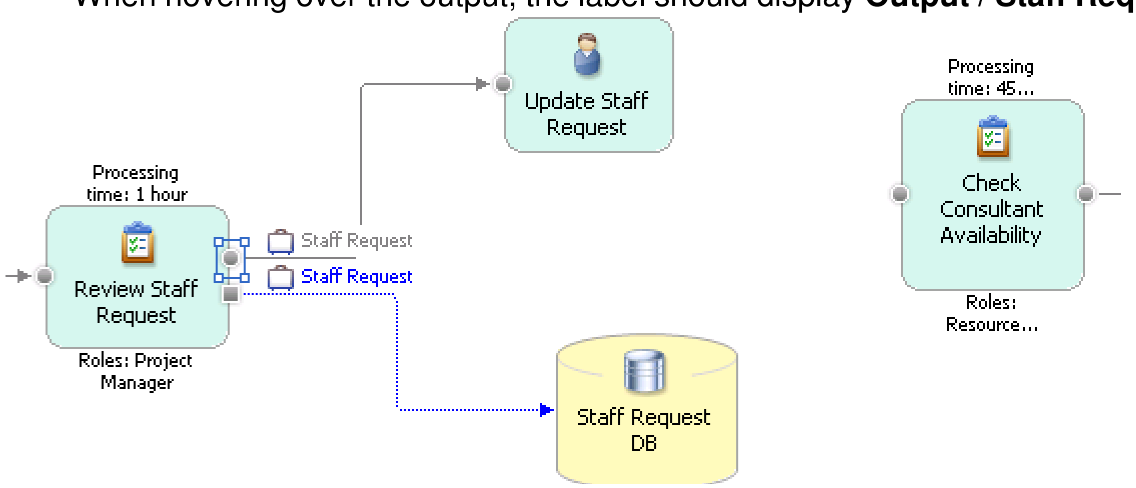
Selecting **Insert Horizontal Space**, on the other hand, will add horizontal white space to a *specific* section of the diagram.

__ b. Delete the connection between **Review Staff Request** and **Check Consultant Availability**.

__ c. Move the **Update Staff Request Form** human task and the **Staff Request DB** repository to the location shown below.

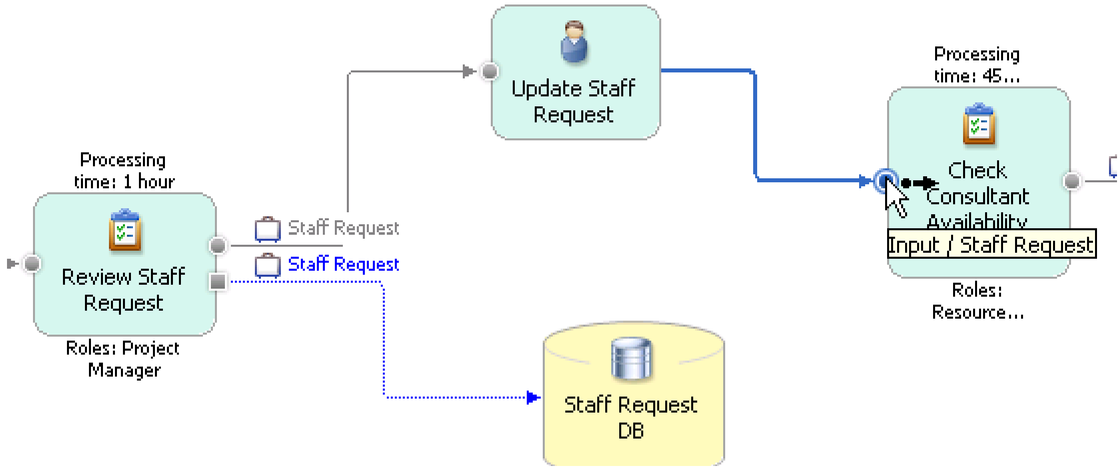


__ d. Click the **Create connection** button from the palette and connect **Review Staff Request** to **Update Staff Request Form**. Be sure to click the output circle. When hovering over the output, the label should display **Output** / **Staff Request**.



The Staff Request business item will be associated with the human task automatically.

__ e. Connect the human task to **Check Consultant Availability**.
Be sure to connect to the input. When hovering over the input, the label should display **Input** / **Staff Request**.

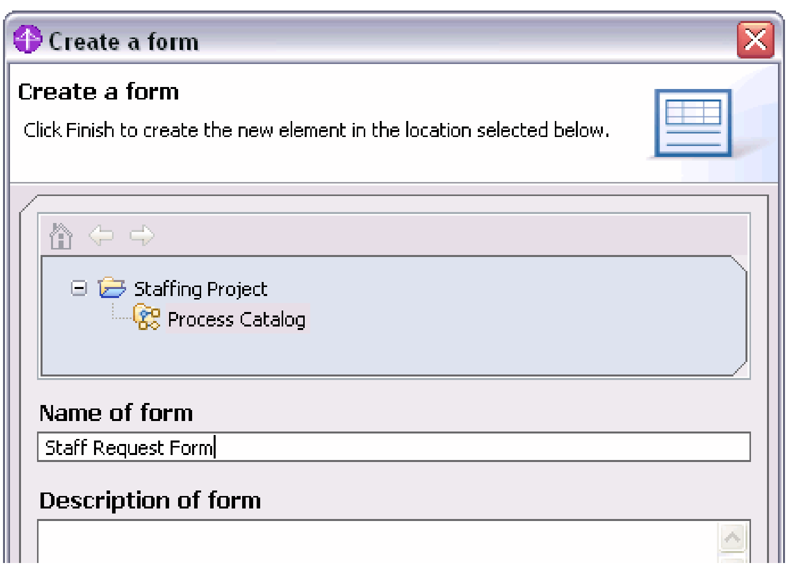


__ 3. Create a new form called `Staff Request Form` and associate it with the human task.

__ a. Select the **Update Staff Request Form** human task in order to view the attributes for the selected element.

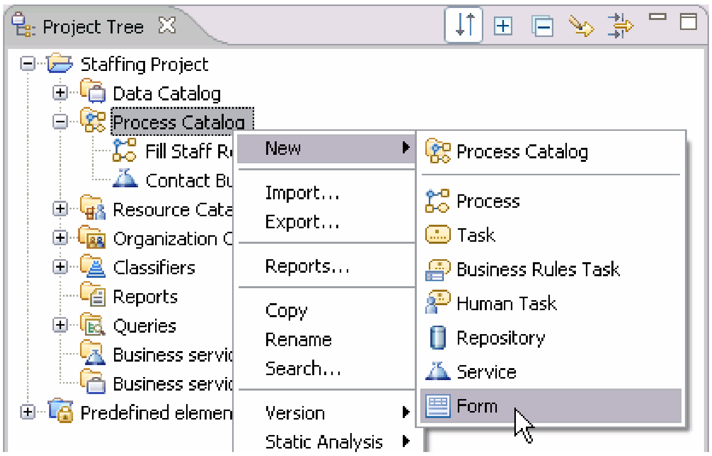
__ b. Click the **Forms** tab and click **New**.

__ c. Enter `Staff Request Form` and click **Finish**.



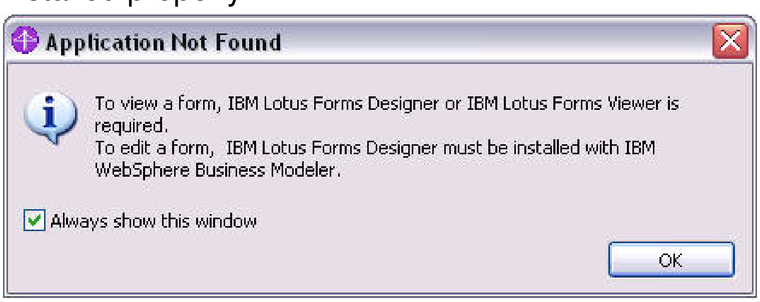
Note

Alternatively, you can create new forms by right-clicking the process catalog and selecting **New > Form** from the context menu.

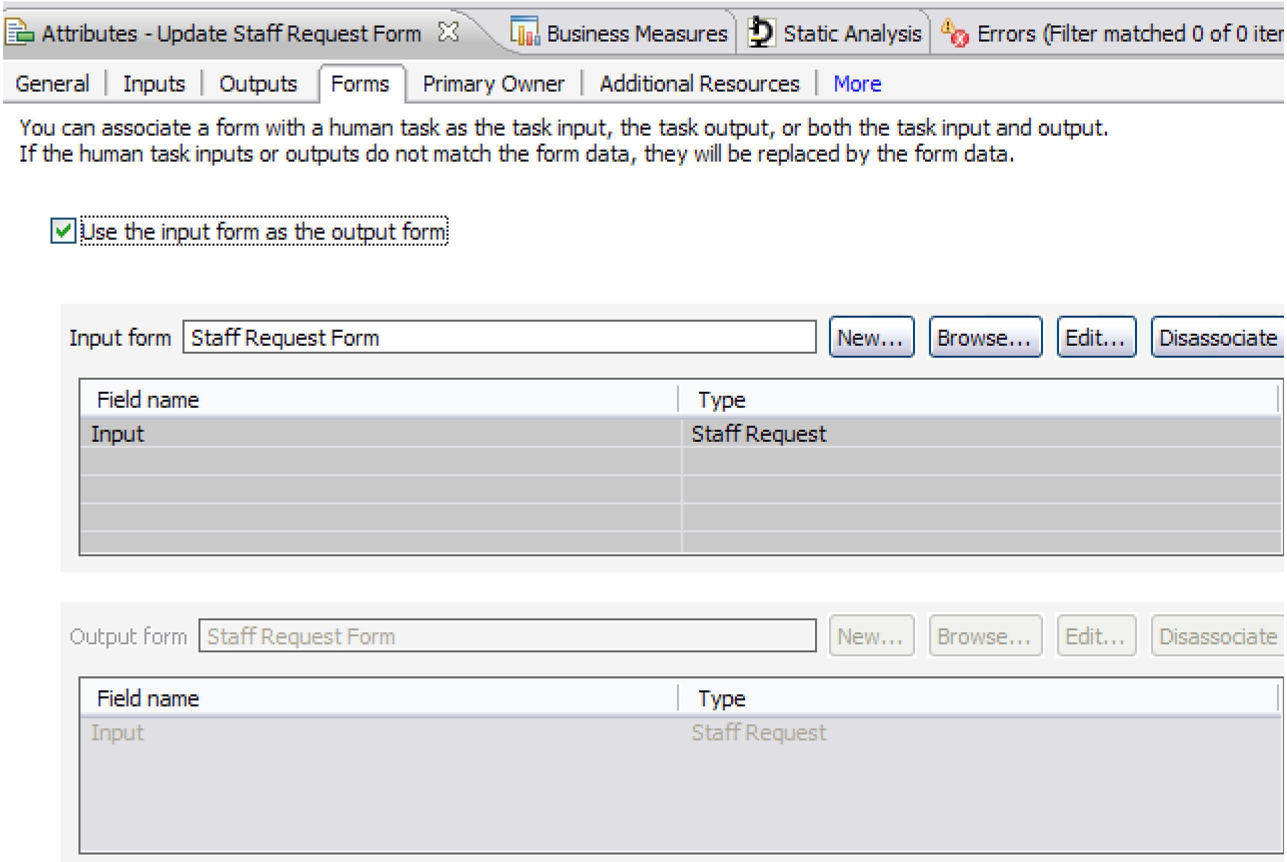


Note

If you encounter an **Application Not Found** error, verify that IBM Lotus Forms Designer is installed properly.



__ d. Verify that the newly created form is associated with the Update Staff Request Form. If it is not, check the box next to **Use the input form as the output form.**



Note

After associating a form to the human task, a small form icon appears in the human task icon.

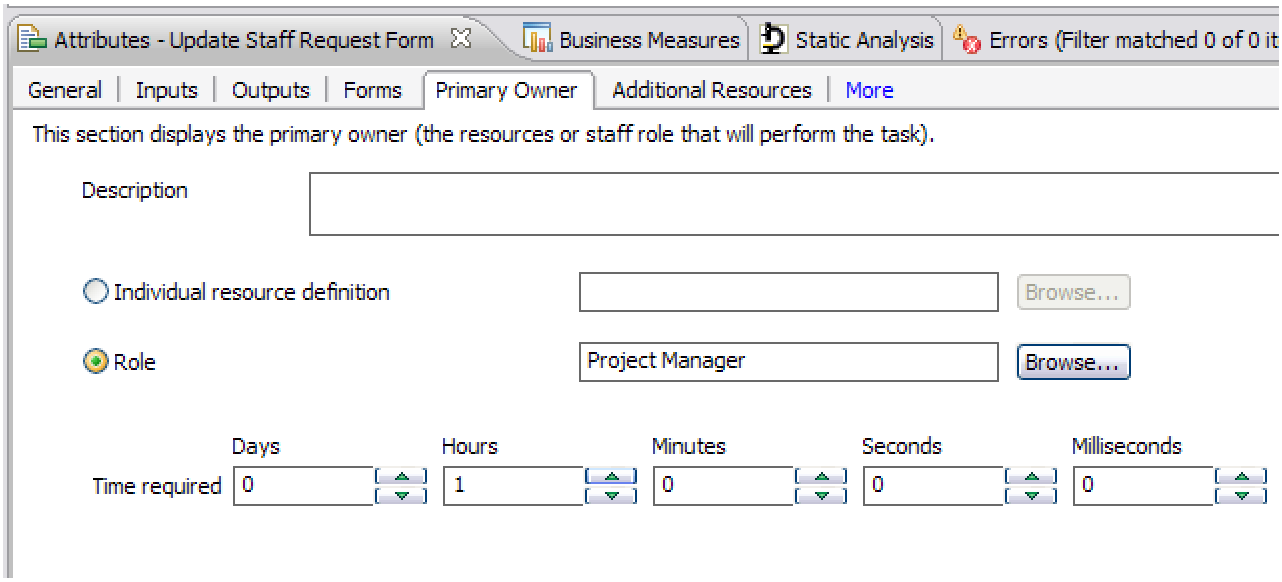
__ 4. Assign the **Project Manager** role as the primary owner of the human task and specify a required time of **`1 hour`**.

__ a. Click the **Primary Owner** tab.

__ b. Click the **Role** radio button and click **Browse**.

___ c. Expand **Staffing Project > Resource Catalog**, select **Project Manager**, and click **OK**.

___ d. Next to **Time required**, enter `1` **hour**.



___ 5. Click **More** to display the **Escalations** tab.

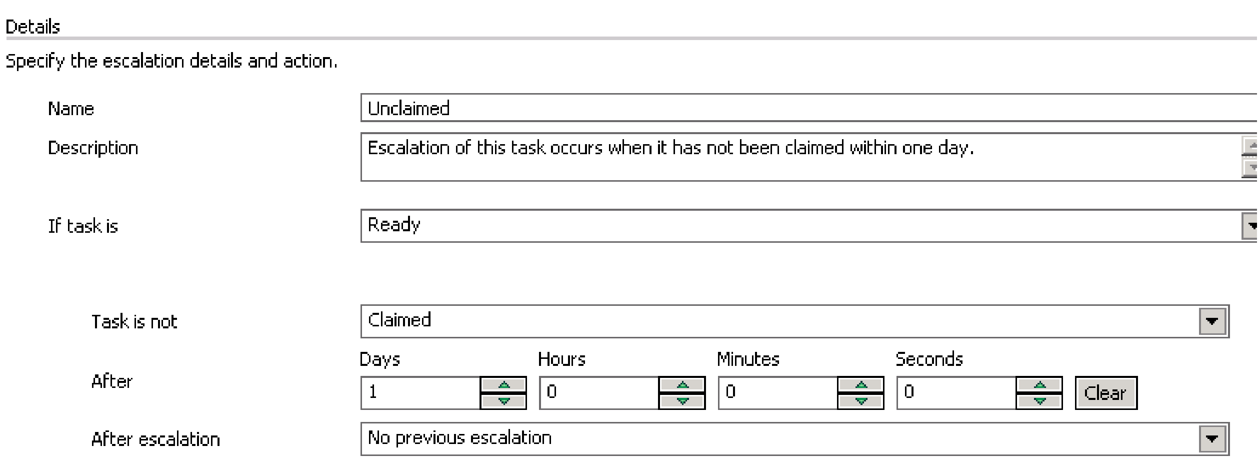
___ 6. Create an escalation called **Unclaimed**.

___ a. Click the **Escalations** tab and click **Add**.

___ b. Change the escalation name to **`Unclaimed`** and change the description to the following:
`Escalation of this task occurs when it has not been claimed within one day.`

___ c. In the **If task is** field, verify **Ready** is selected.

___ d. In the **Task is not** field, verify **Claimed** is selected and change the duration to **1 day**. Be sure to zero out the **Hours** field.



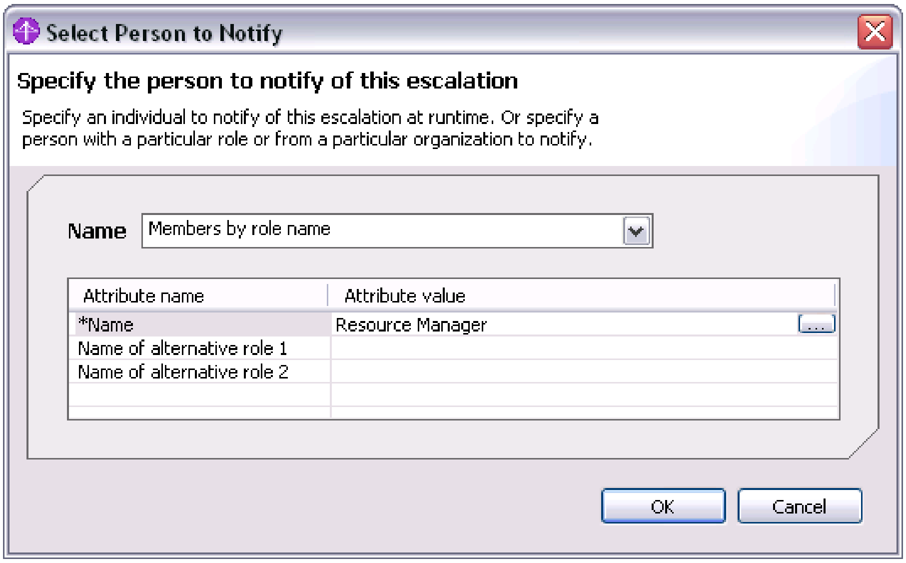
___ e. In the **Notify** field, click **Select.**

The **Select Person to Notify** window displays.

__ f. From the **Name** drop-down menu, select **Members by role name**.

__ g. In the ***Name** row of the table, click the cell under **Attribute value** and click the small browse button (...).

__ h. In the **Select a role** window, select **Resource manager** and click **OK**.



__ i. Back in the **Select Person to Notify** window, click **OK**.

__ j. Next to the **E-mail message** field, click **Edit**.

__ k. Change the **Subject** field to `Task not complete` and the **Text** field to **`Update of staff request form has not been completed.`**

__ l. Click **OK**.

__ 7. Save changes (Ctrl+S).

Note

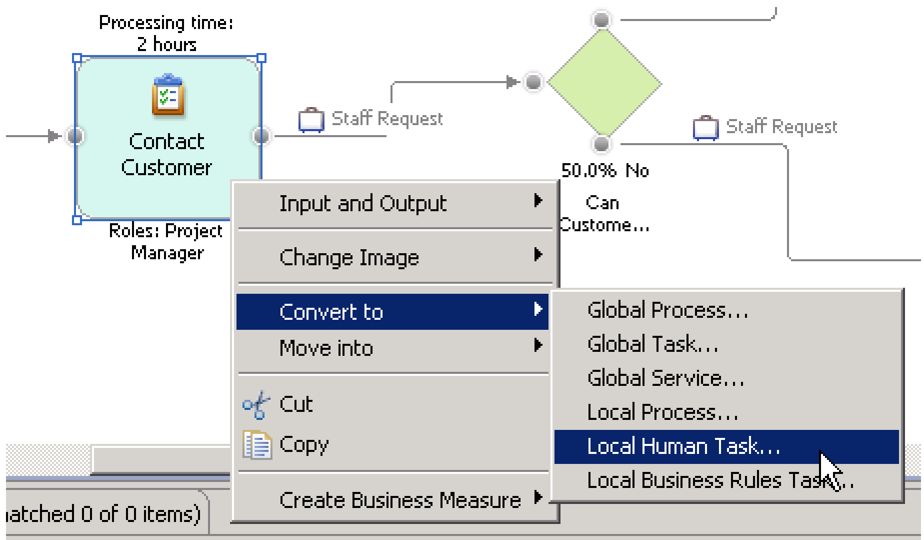
Tip: Use the tree format of the escalations summary to view the relationship of the escalations to each other. You can also create relationships between escalations in the tree format by adding new escalations in specific places. Use the table format to quickly review

all the escalations. You can switch between these formats using the Tree Format ( ) and Table Format ( ) icons beside the escalations summary table.

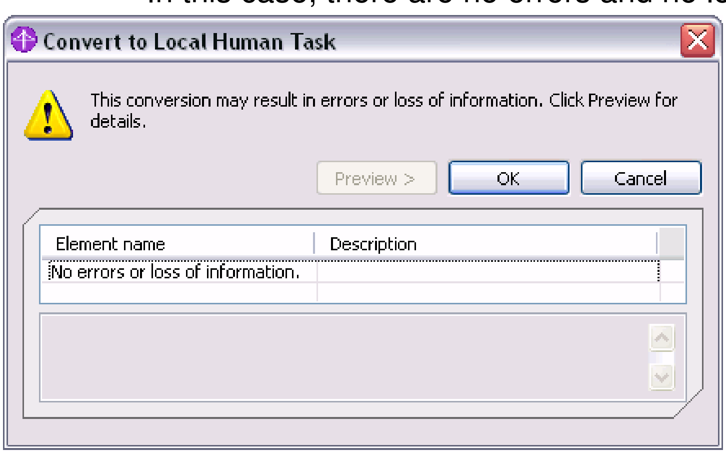
Part 3: Converting a local task to a human task

__ 1. Convert the Contact Customer task to a local human task.

__ a. Right-click the **Contact Customer** task and select **Convert to > Local Human Task**.

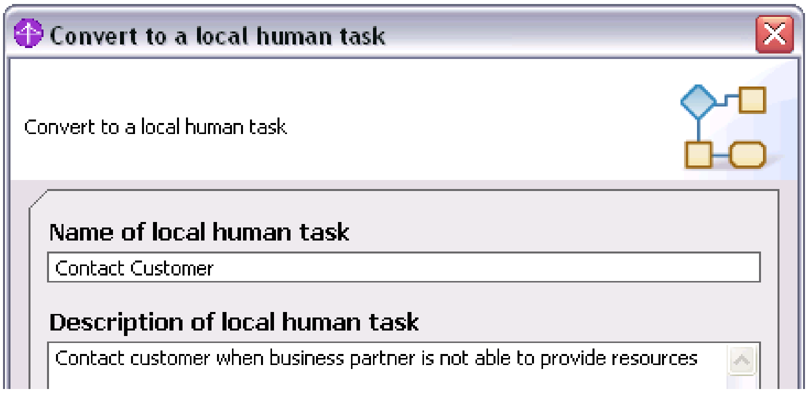


__ b. In the **Convert to Local Human Task** dialog box, click **Preview** to see whether there will be any errors or loss of information during the conversion.
In this case, there are no errors and no loss of information.

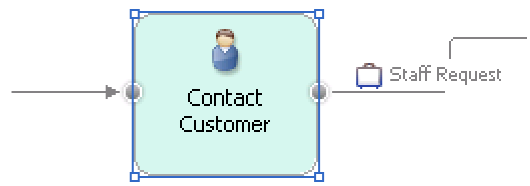


__ c. Click **OK** to continue with the conversion.

__ d. Click **OK** to accept the name of the local human task.



__ e. Verify that the task has been converted to a human task.



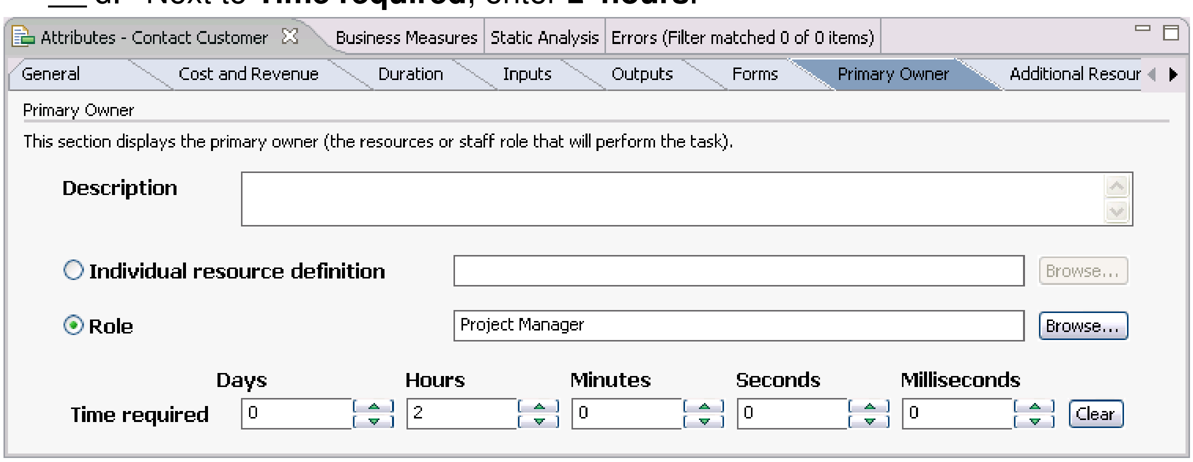
__ 2. Assign the **Project Manager** role as the primary owner of the human task and specify a required time of **2 hours**.

__ a. Click the **Primary Owner** tab.

__ b. Click the **Role** radio button and click **Browse**.

__ c. Expand **Staffing Project > Resource Catalog**, select **Project Manager**, and click **OK**.

__ d. Next to **Time required**, enter **2 hours**.



__ 3. Save changes (Ctrl+S).

Part 4: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. How do you schedule a human task?

____

__ 2. How do you import Lotus Forms?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 7. Defining business rule tasks

Estimated time

00:30

What this exercise is about

This exercise covers defining business rules task.

What you should be able to do

At the end of the exercise, you should be able to:

- Create and define a business rule task
- Define business rules
- Define conditions and actions

Exercise instructions

This lab walks you through the steps to updating the business process model.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab7_workspace`

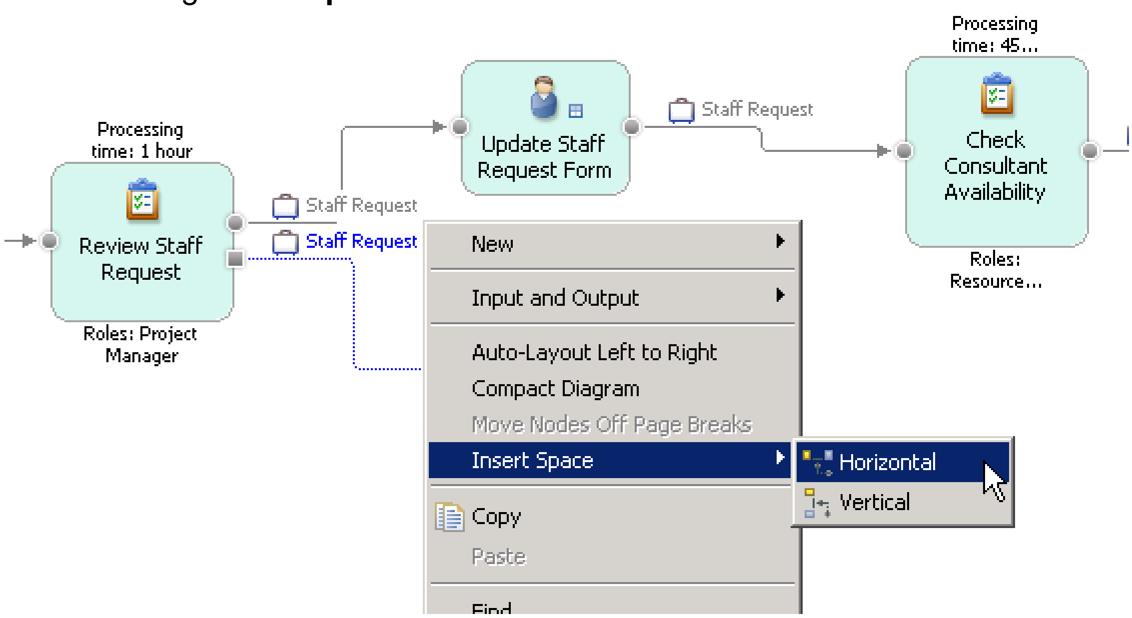
Part 2: Creating a business rules task

In this part of the exercise, you will be creating and connecting a business rules task.

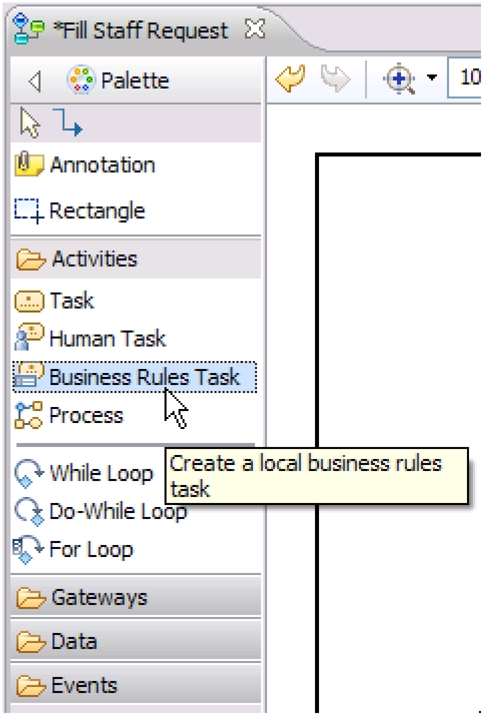
__ 1. In the **Fill Staff Request** process, add a local business rules task called **Determine Quantity Needed**. This will be the second task in the process flow, between the **Review Staff Request** and **Update Staff Request Form** tasks.

__ a. Open the **Fill Staff Request** process from the Project Tree.

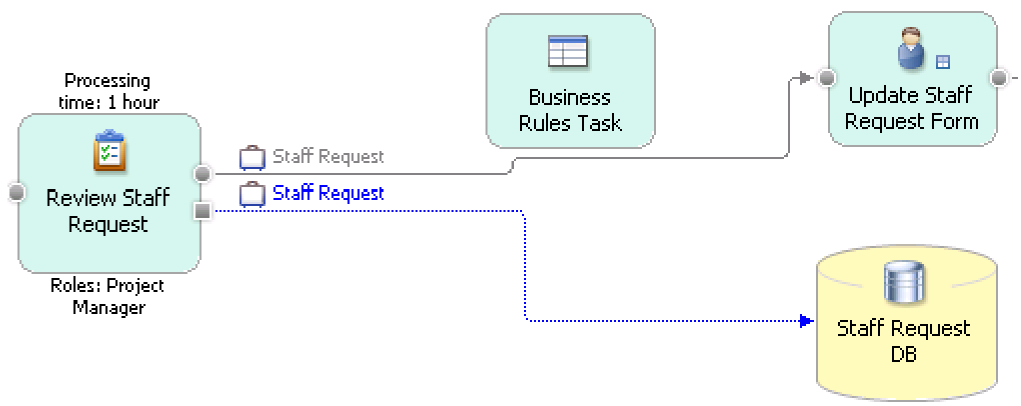
__ b. Insert additional space between **Review Staff Request** and **Update Staff Request Form** by right-clicking in the area between these two tasks and selecting **Insert Space > Horizontal** from the context menu.



___ c. From the palette of the process editor, click the business rules task.



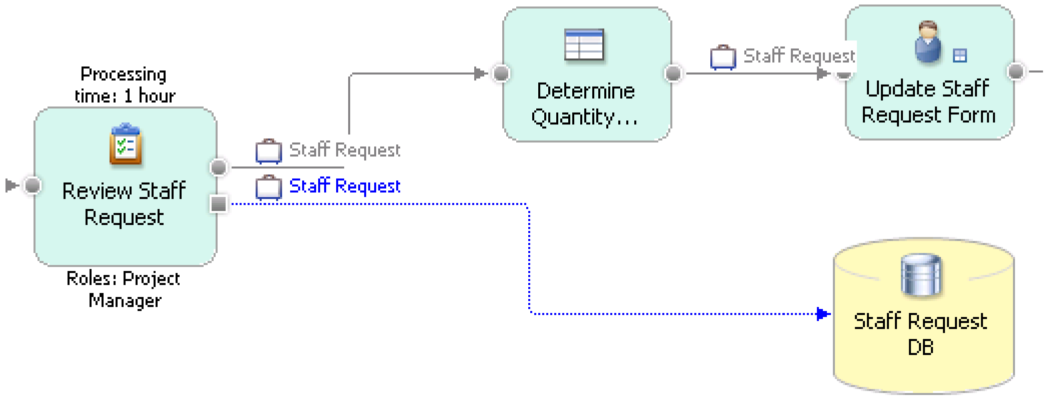
___ d. In the diagram, drop the new business rules task into the space that was just created between **Review Staff Request** and **Update Staff Request Form**.



___ e. Change the name of this task to `Determine Quantity Needed`

___ f. Delete the connection between **Review Staff Request** and **Update Staff Request Form**. Then connect the new business rules task as shown below.

Tip: After connecting the tasks, right-click the diagram and select **Auto-Layout Left to Right** to clean up the diagram.



__ 2. Save changes (Ctrl+S).

Part 3: Defining business rules

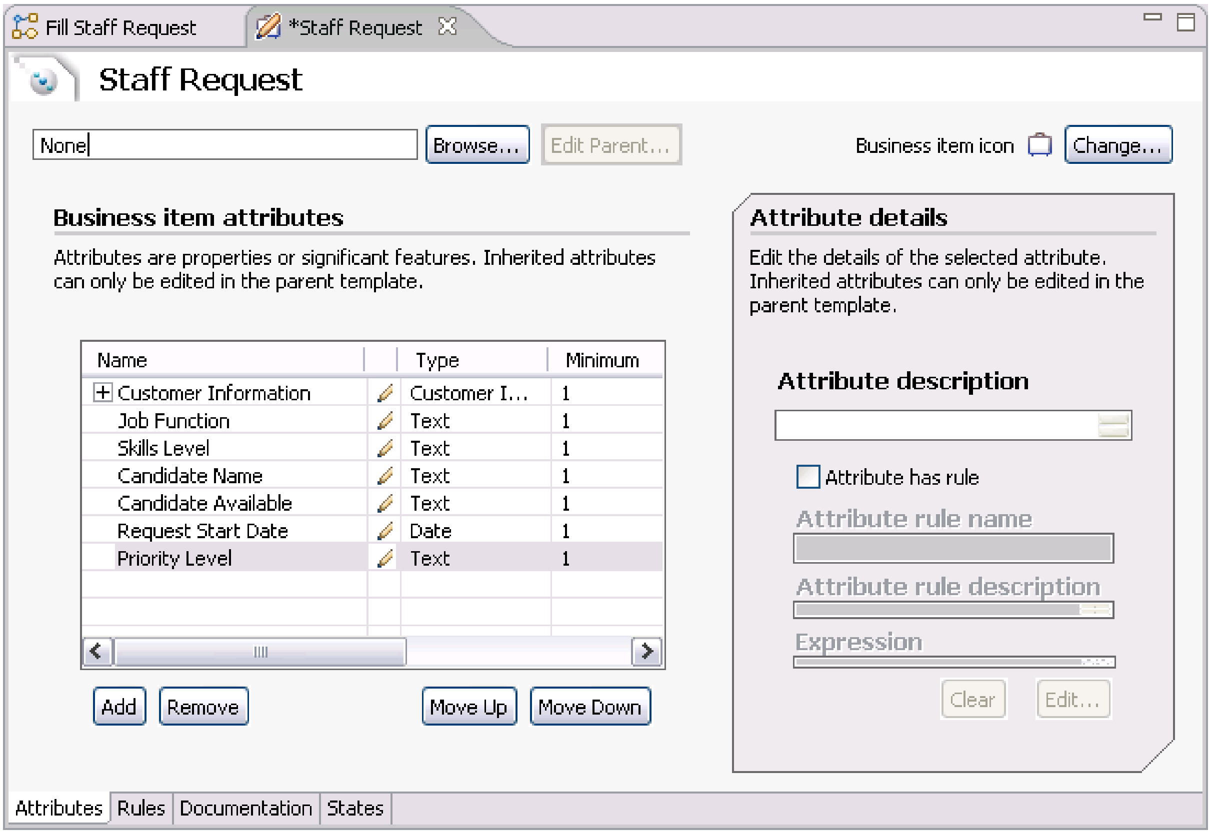
__ 1. Before defining the business rules, you will need to add more data to the **Staff Request** business item. Open the **Staff Request** business item and add four more attributes:

- Name: **`Priority Level`**
  Type: Text
- Name: **`Quantity Requested`**
  Type: **Integer**
- Name: **`Estimated Number of Hours`**
  Type: **Integer**
- Name: **`Quantity Assigned`**
  Type: **Integer**

__ a. In the Project Tree, expand **Data Catalog** and double-click **Staff Request**.

__ b. In the business item editor, double-click an empty row in the **Business item attributes** section to add a new attribute.

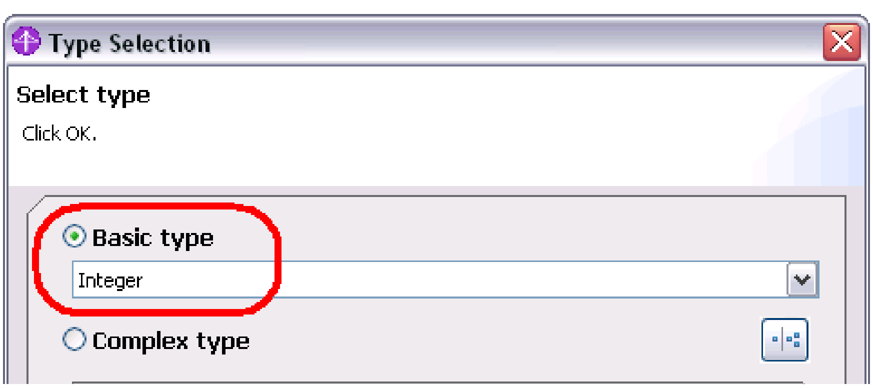
___ c. Change the name of this new attribute to **`Priority Level`**
Since this attribute will contain text, the attribute's current type, **Text**, does not need to be changed.



___ d. Add a new attribute and name it **`Quantity Requested`**

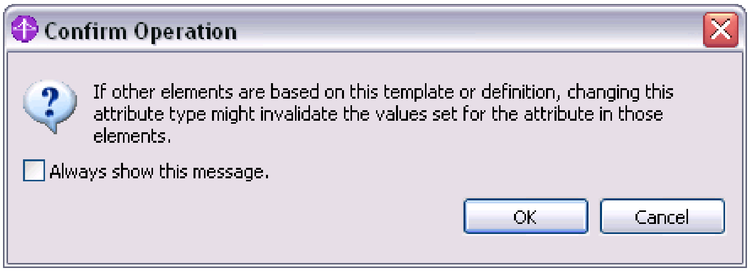
___ e. Change the attribute's type by clicking the **Text** cell and then clicking the small browse button ( ) that appears.

___ f. In the **Type Selection** window, select **Integer** from the **Basic type** drop-down menu and click **OK**.



___ g. If the **Confirm operation** dialog box appears, clear the **Always show this message** check box and click **OK**.

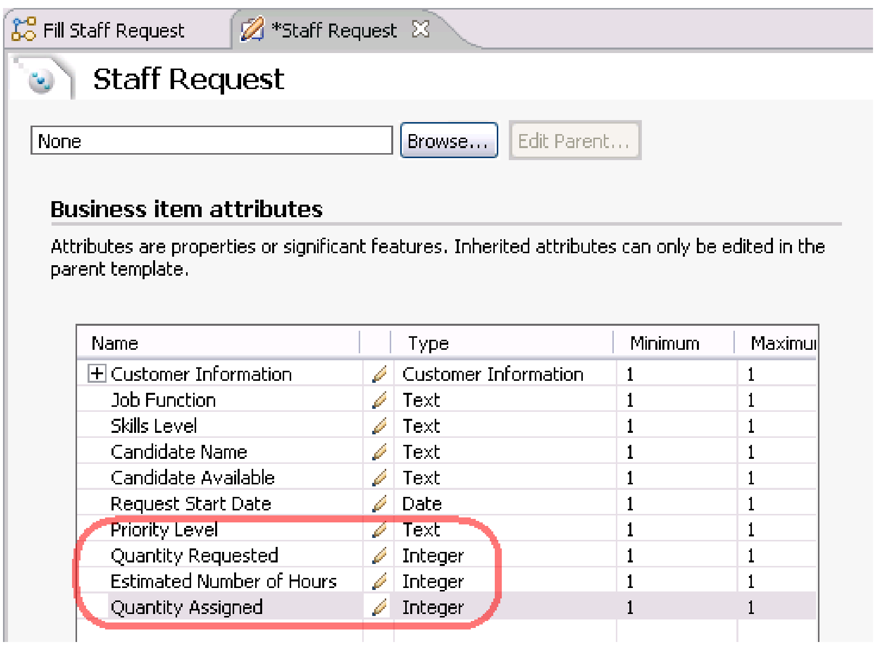
This message warns you about changing the attribute type because this might affect other parts of your model if the business item is currently being used.



__ h. Repeat the steps above to add the remaining two attributes, which are also an **Integer** types:

-Estimated Number of Hours

- Quantity Assigned

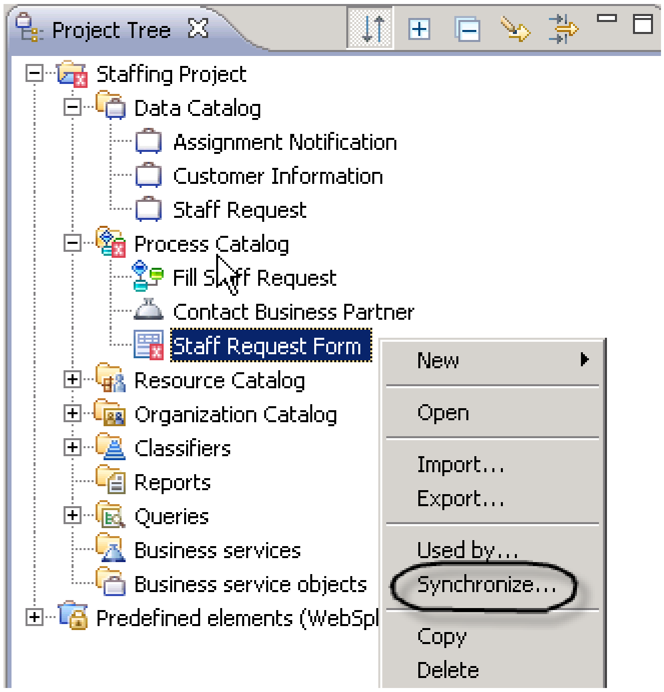


These four attributes will be used in the next part of this exercise.

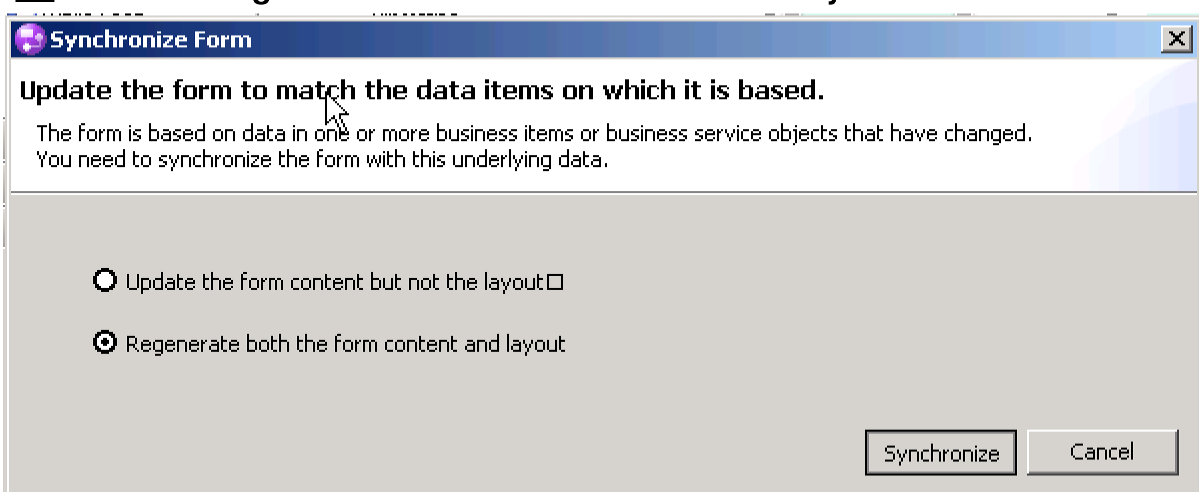
__ 2. Save changes (Ctrl+S) and close the **Staff Request** editor.

__ 3. Once you have saved the changes, there are errors that the **Staff Request Form** is no longer matched the **Staff Request**. To correct these errors, you will need to synchronize the **Staff Request Form**.

__ a. Right-click **Staff Request Form**, and select **Synchronize**.



__ b. Select **Regenerate both the form content and layout**..



__ c. Click **Synchronize.**

The errors are fixed.

__ 4. Create a business rule called **`Priority level`**.

__ a. In the **Fill Staff Request** process diagram, select the **Determine Quantity Needed** business rules task.

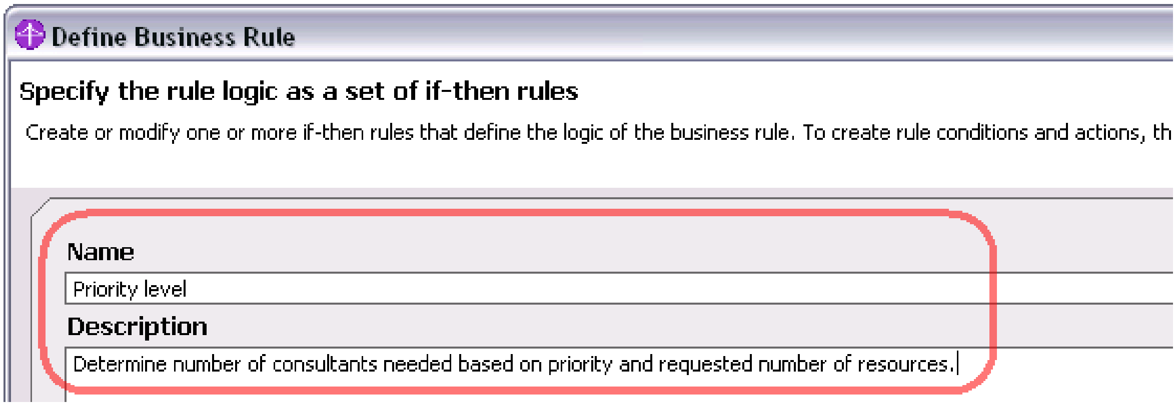
__ b. In the **Attributes** pane, click the **Business Rules** tab.

__ c. In the **Business rules** section, click **Add** to add a new business rule.

__ d. Type the following content:

Name: **`Priority level`**

Description: **`Determine number of consultants needed based on priority and requested number of resources.`**



__ 5. Create an If-Then rule called **`High Priority or Long Project`** with the following rule condition:

`'Determine Quantity Needed.Input.Priority Level' is equal to "High" OR 'Determine Quantity Needed.Input.Estimated Number of Hours' is greater than 960.0`

__ a. Click the **If-Then Rules** tab and click **Add Rule** to add an If-Then rule.

__ b. Click the cell under **Rule name** and change the text to: **`High Priority or Long Project`**

__ c. Click the cell under **Rule condition** and click the small browse button ( ) that appears.
This opens the **Expression Builder**.

__ d. Click **Add** in the **Simple binary expression** section.

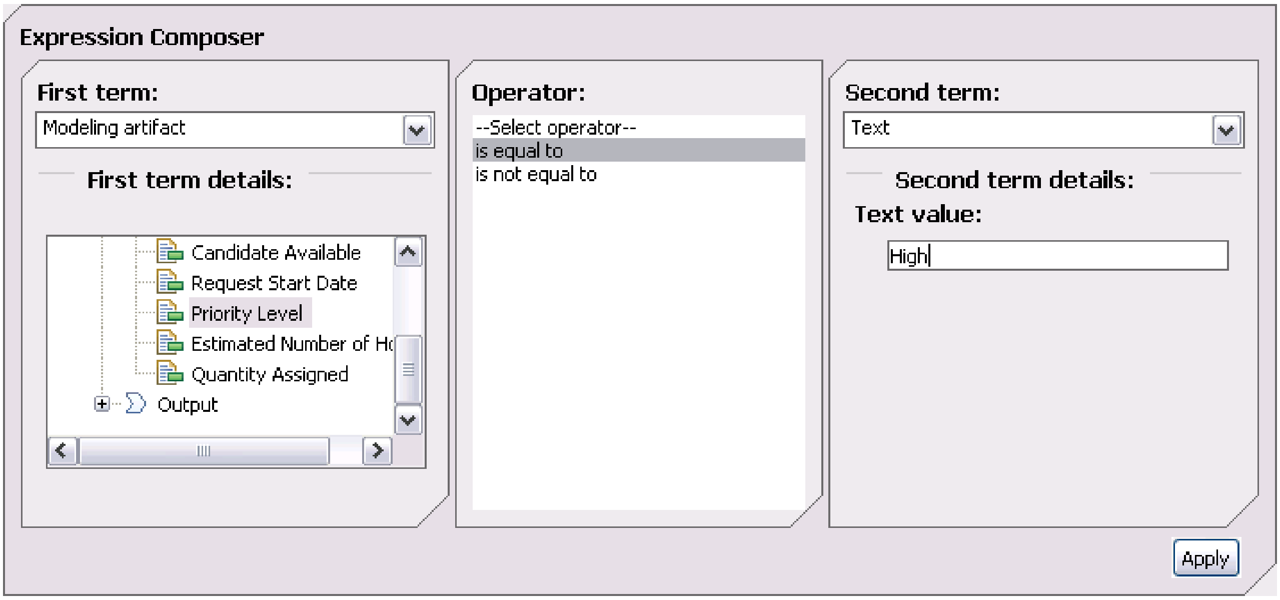
__ e. Under **Expression Composer**, verify that **Modeling artifact** is selected for **First term**.

__ f. Under **First term details**, expand **Determine Quantity Needed > Input**.

__ g. Scroll down to select **Priority Level**.

__ h. Under **Operator**, select **is equal to**.

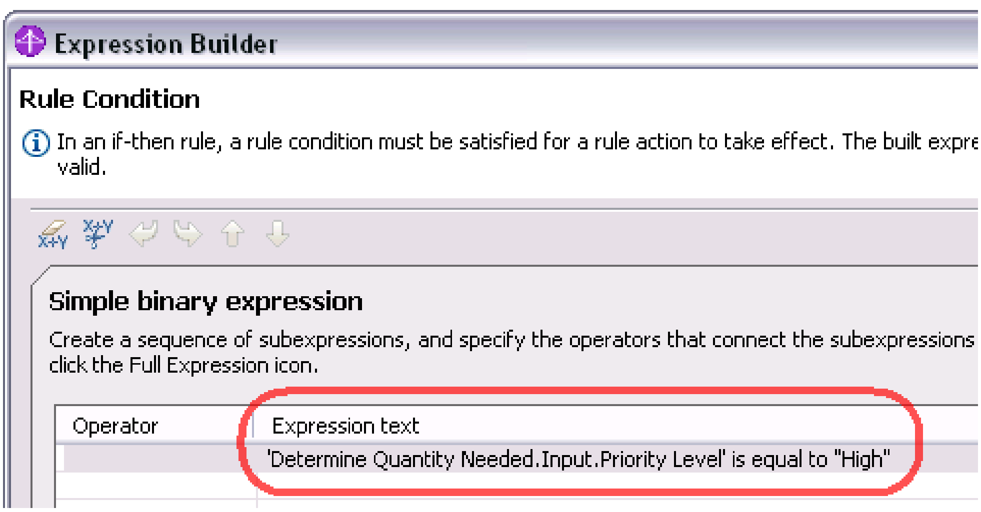
__ i. Under **Second term**, select **Text** from the drop-down menu and type `High` in the **Text value** field.



__ j. Click **Apply**.

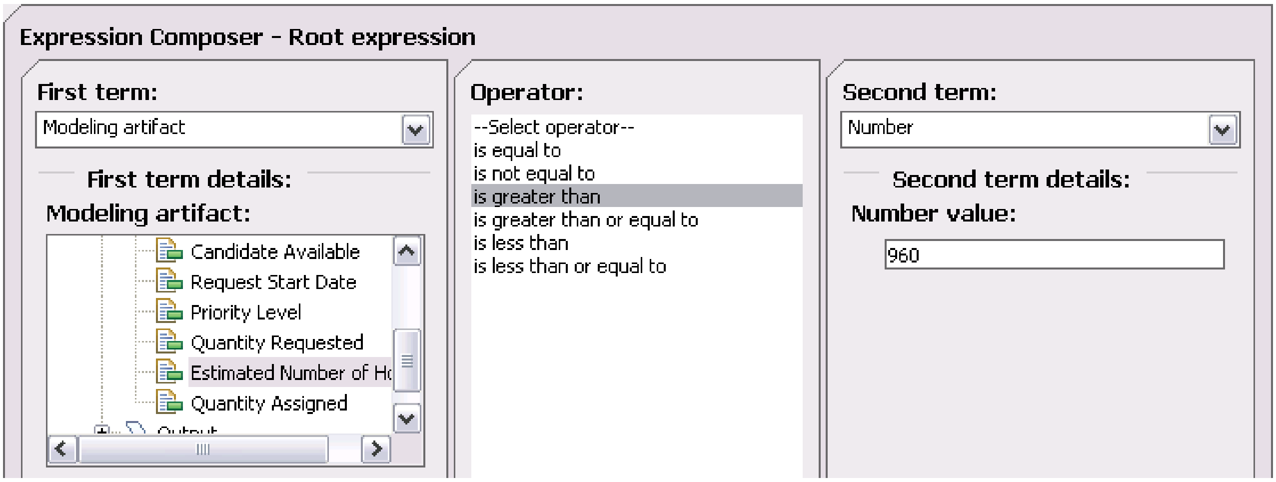
__ k. Near the top of the Expression Builder, verify that the expression text under **Simple binary expression** displays the correct expression logic:

`'Determine Quantity Needed.Input.Priority Level' is equal to "High"`



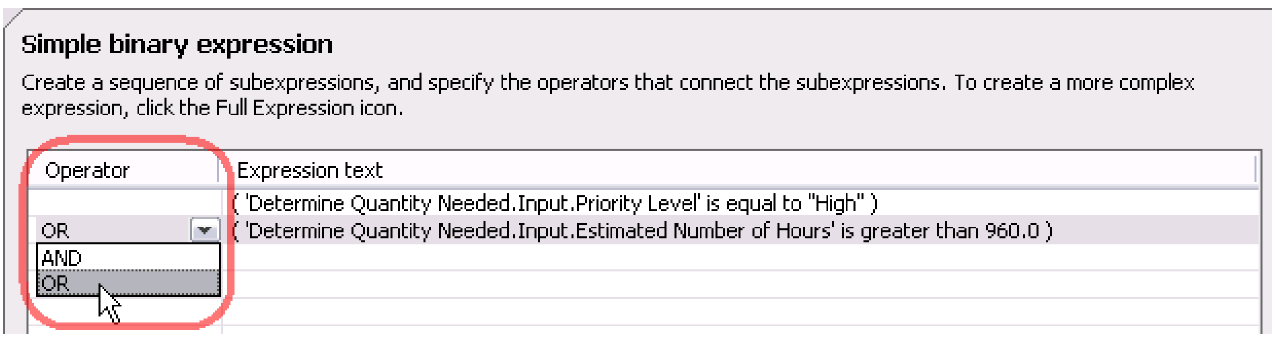
__ l. Click **Add** to add another expression.

__ m. Define the expression as shown below:



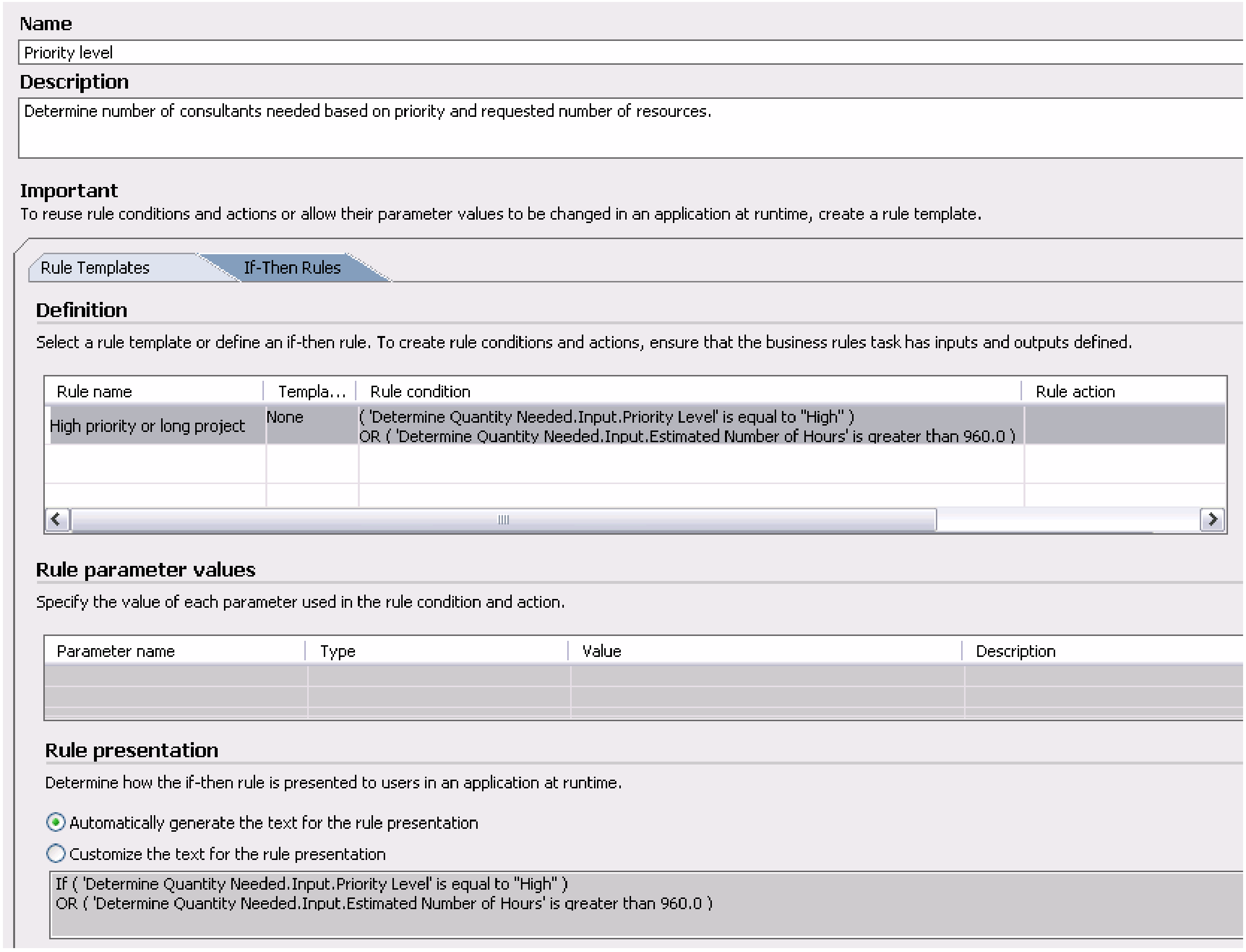
__ n. Click **Apply**.

__ o. At the top, under **Simple binary expression**, change the Operator to **OR** by selecting from the drop-down menu.



__ p. Click **OK**.

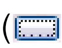
You should now be in the **Define Business Rule** window.



__ 6. Define the following rule action for the **High Priority or Long Project** If-Then rule:

`'Determine Quantity Needed.Input.Quantity Requested' x 2`

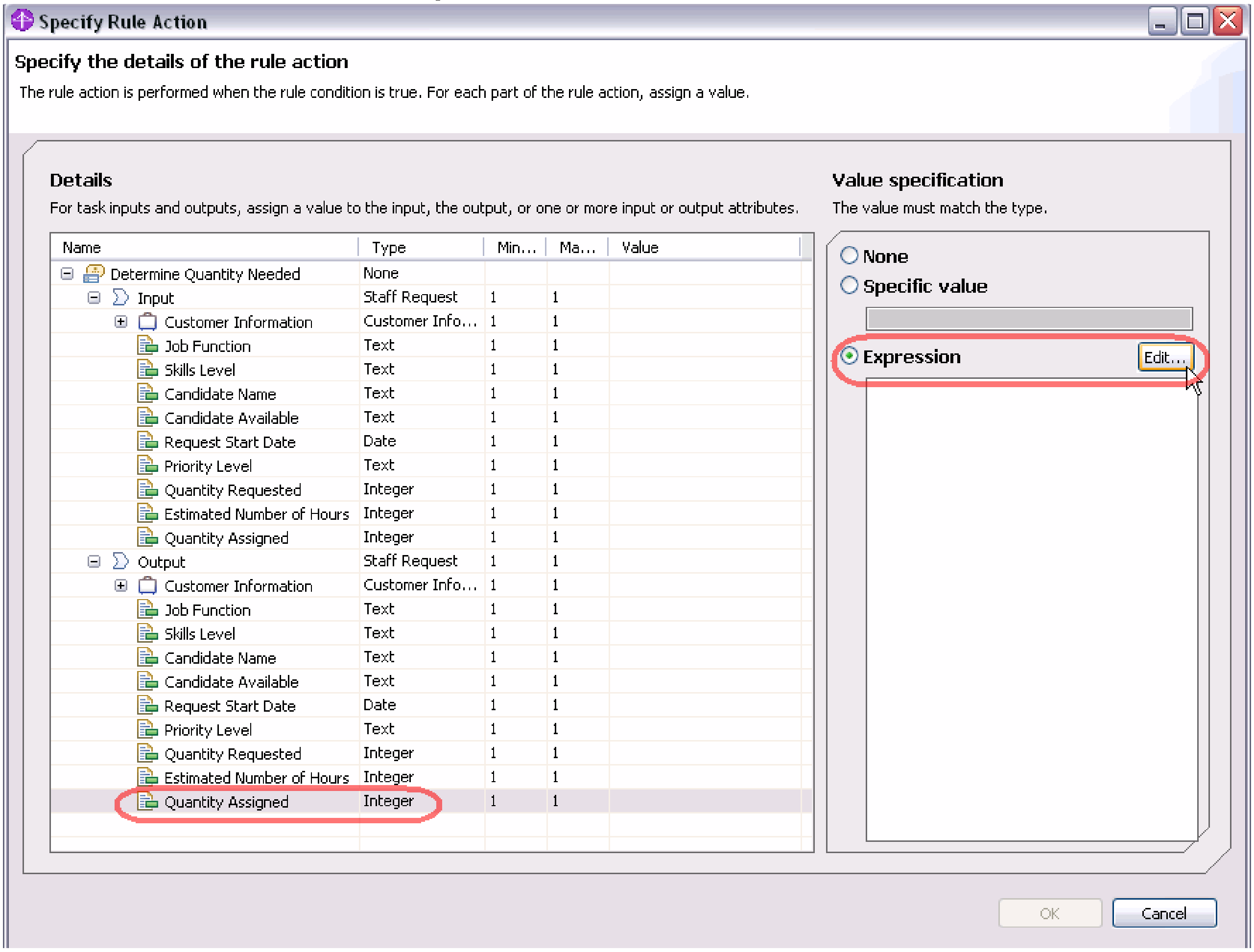
This expression calculates the number of resources to be assigned. If the project is classified as high priority or is a long project, this business rule doubles the number of the original quantity that was requested.

__ a. Click the cell under **Rule action** and click the small browse button () that appears.

The **Specify Rule Action** window opens.

__ b. Select the **Quantity Assigned** row of the **Output** business item and under **Value specification**, select the **Expression** radio button.

__ c. Click **Edit**.
This launches the **Expression Builder**.



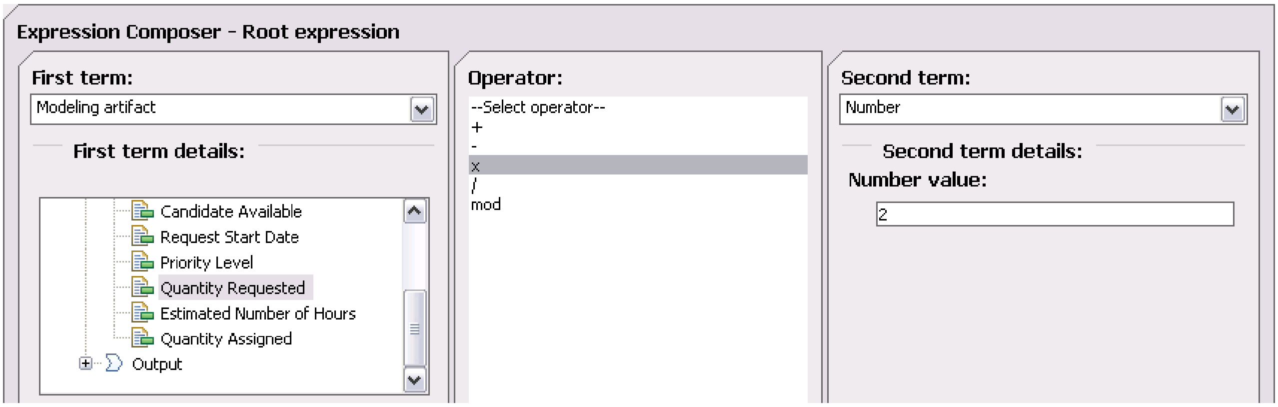
__ d. Under **Expression Composer**, verify **Modeling artifact** is selected for the **First term**.

__ e. Under **First term details**, expand **Determine Quantity Needed > Output**.

__ f. Scroll down and select **Quantity Requested**.

__ g. Under **Operator**, select the multiplication operator: **x**

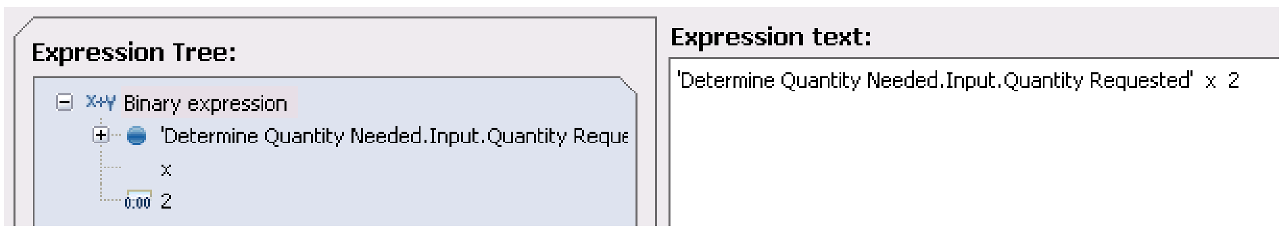
__ h. Under **Second term**, select **Number** from the drop-down menu and type **2** in the **Number value** field.



__ i. Click **Apply**.

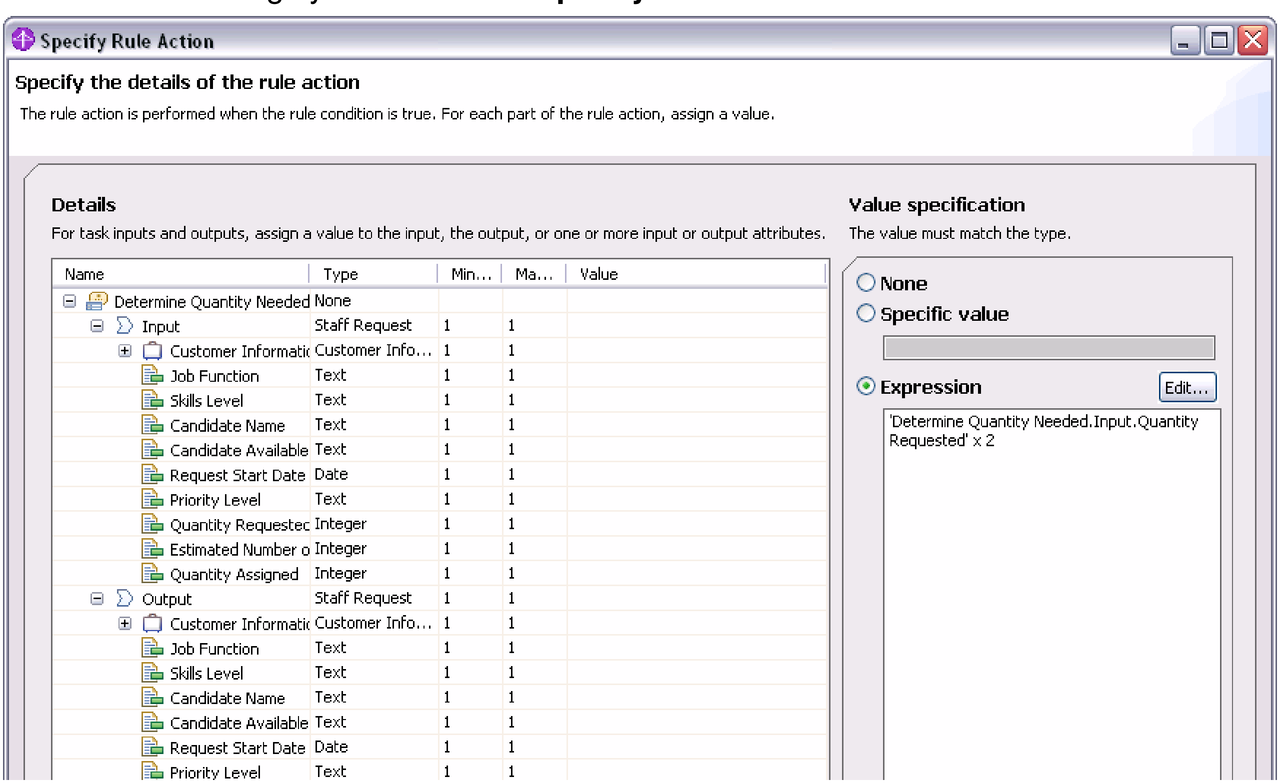
__ j. Near the top of the Expression Builder, verify that the **Expression text** displays the correct expression logic:

`'Determine Quantity Needed.Input.Quantity Requested' x 2`



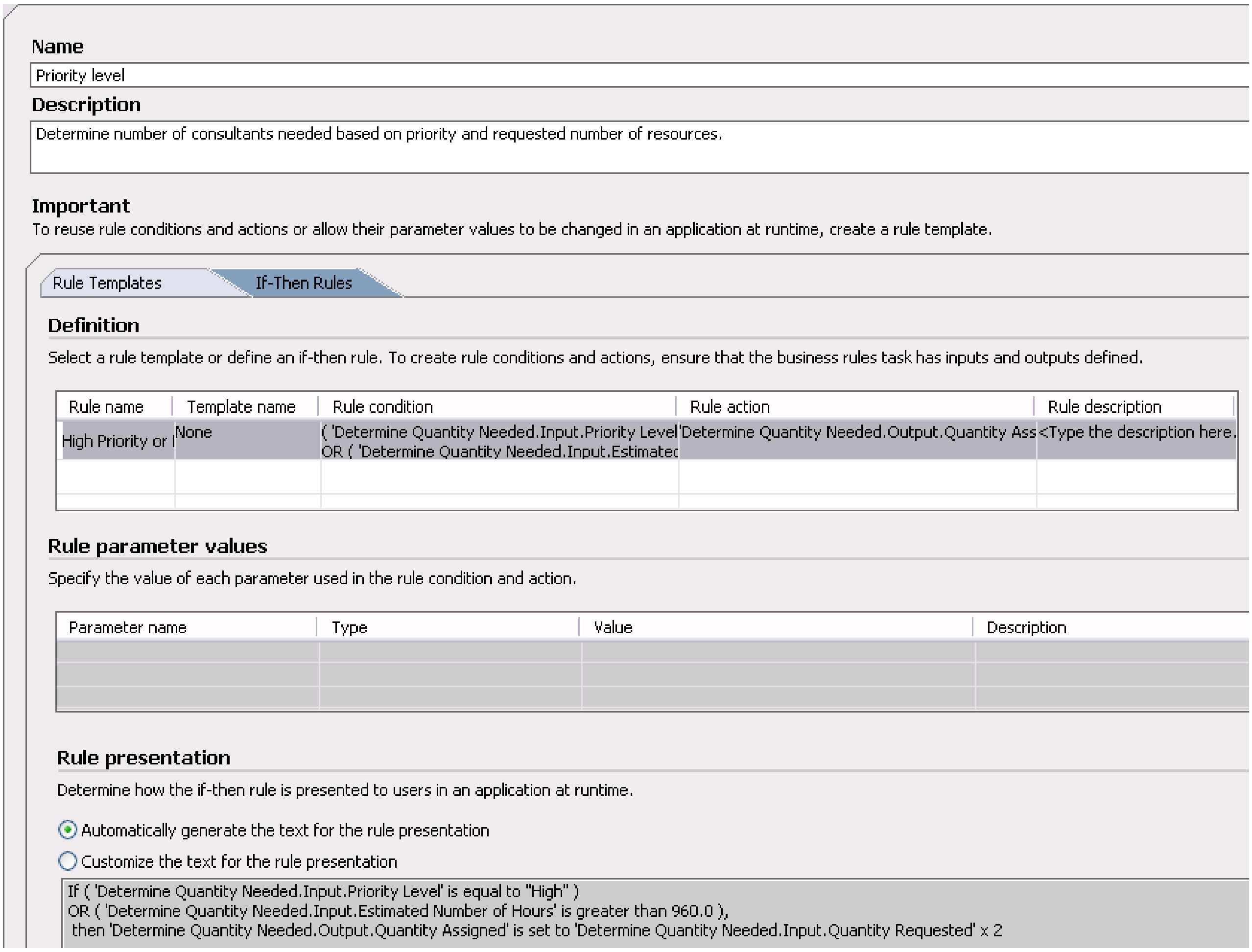
__ k. Click **OK**.

This brings you back to the **Specify Rule Action** window.



__ l. Click **OK** again.

You should now be in the **Define Business Rule** window.



__ m. Click **OK** to close the **Define Business Rule** window.

__ 7. Save changes (Ctrl+S).

Part 4: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. How do you schedule business rules?

____

__ 2. What are the benefits of business rules?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 8. Linking requirements to Rational RequisitePro

Estimated time

00:30

What this exercise is about

This exercise covers the integrating with Rational RequisitePro.

What you should be able to do

At the end of the exercise, you should be able to:

- Open a RequisitePro project in Requirement perspective
- Associate Modeler elements with requirements
- Add requirements and change types

Requirements

- IBM Rational RequisitePro installed
- IBM Rational RequisitePro Integration plug-in installed

Exercise instructions

This lab walks you through the steps to integrate the model with requirements from RequisitePro.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab8_workspace`

Note that this workspace uses the ClaimBM project, which is different from the workspaces for other labs in this course.

The ClaimBM.mar project is also available in `C:\Student Files`.

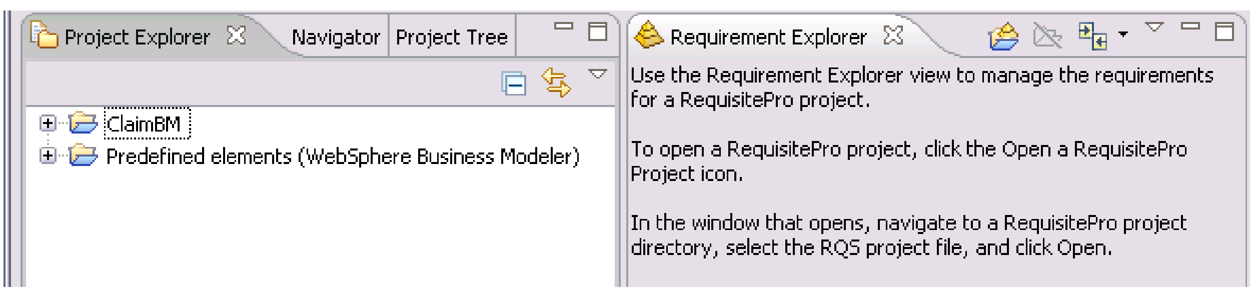
Part 2: Associating requirements

In this part of the exercise, you will be integrating Rational RequisitePro with WebSphere Business Modeler and creating associations between model elements and requirements.

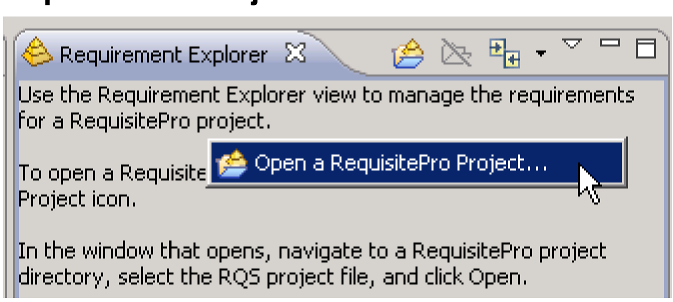
__ 1. Open the Requirement perspective in WebSphere Business Modeler and open the **ClaimBM.rqs** project.

__ a. Navigate to **Window > Open Perspective > Other**.

__ b. Select **Requirement** and click **OK**.
This opens the **Requirement Explorer** view shown below.

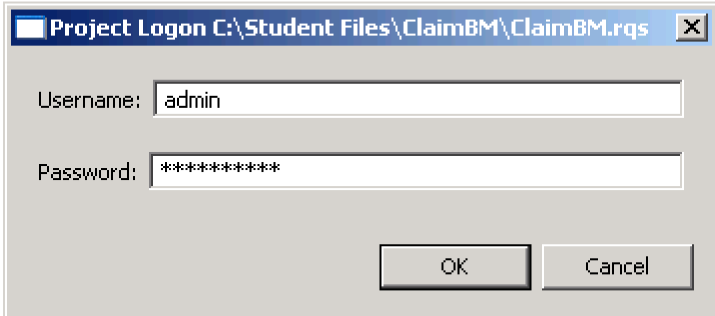


__ c. Right-click inside the **Requirement Explorer** view and click **Open a RequisitePro Project** from the context menu.

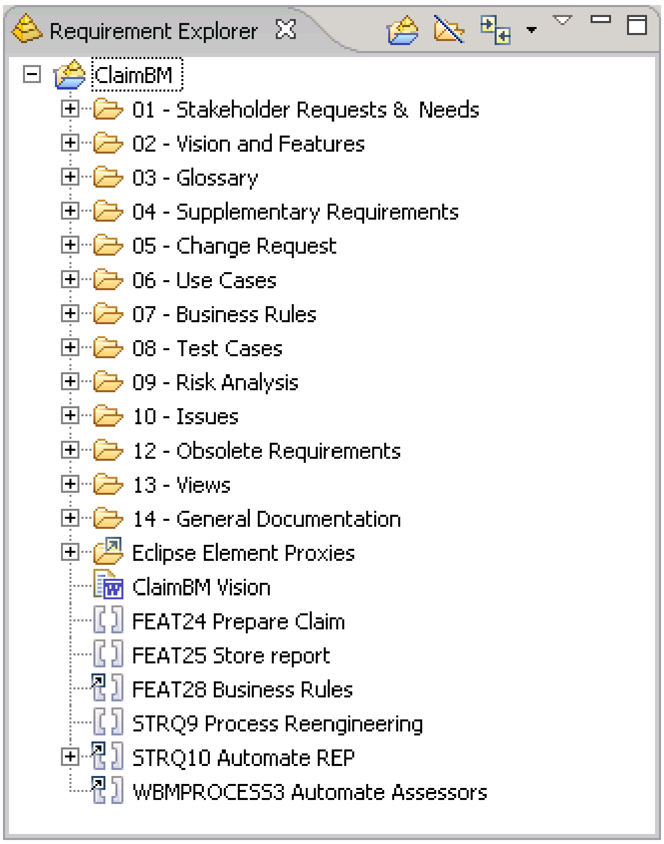


__ d. Select **ClaimBM.rqs**, located in `C:\Student Files\ClaimBM`, and click **Open**.

__ e. In the **Project Logon** window, verify the username is `admin`. Then type **`web1sphere`** in the **Password** field and click **OK**.



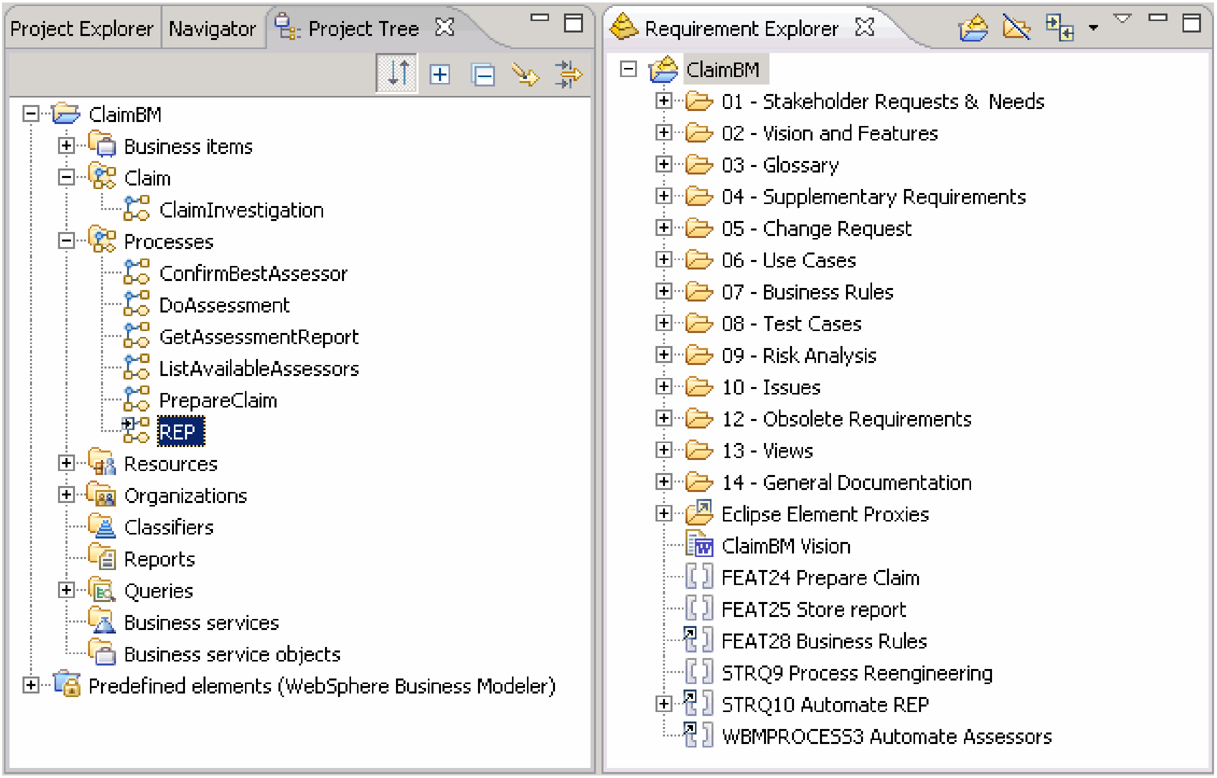
__ f. In the **Requirement Explorer**, expand **ClaimBM** and verify its contents:



__ 2. You now have the Rational RequisitePro project open and you are now ready to create associations.

__ a. In the far left pane, click the **Project Tree** tab, open **ClaimBM > Processes** and drag the **REP** process and drop it on to the **STRQ10 Automate REP** requirement in the **Requirement Explorer**.

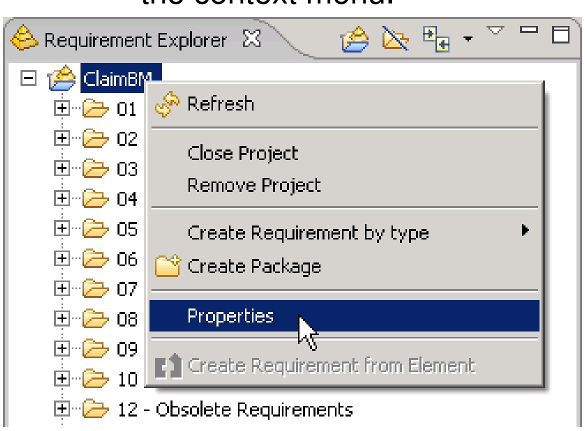
This creates a direct link arrow in the REP process and an indirect link on STRQ10 Automate REP requirement.



__ b. Similarly, select and drag the **PrepareClaim** process and drop it on the **FEAT24 Prepare Claim** requirement.

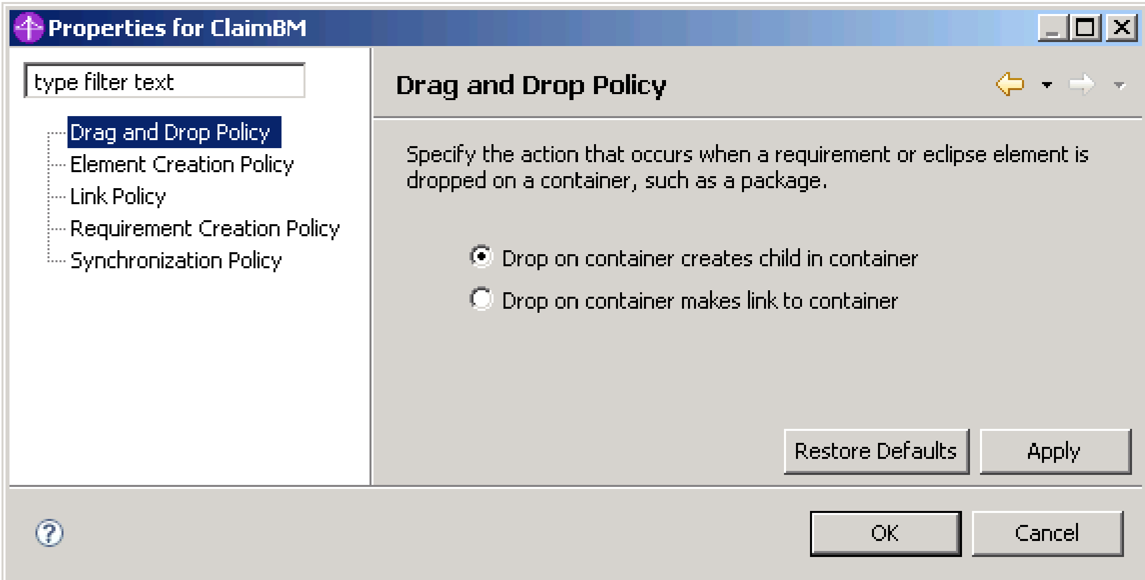
__ c. To remove a link, right-click the element in the Project Tree and select **Linkability** > **Unlink**.

__ d. You can change the default Drag and drop policies and other defaults by right-clicking the ClaimBM requirement project and selecting **Properties** from the context menu.



The **Properties for ClaimBM** window opens.
You can change Drag and Drop Policy, Element Creation Policy, Link Policy,

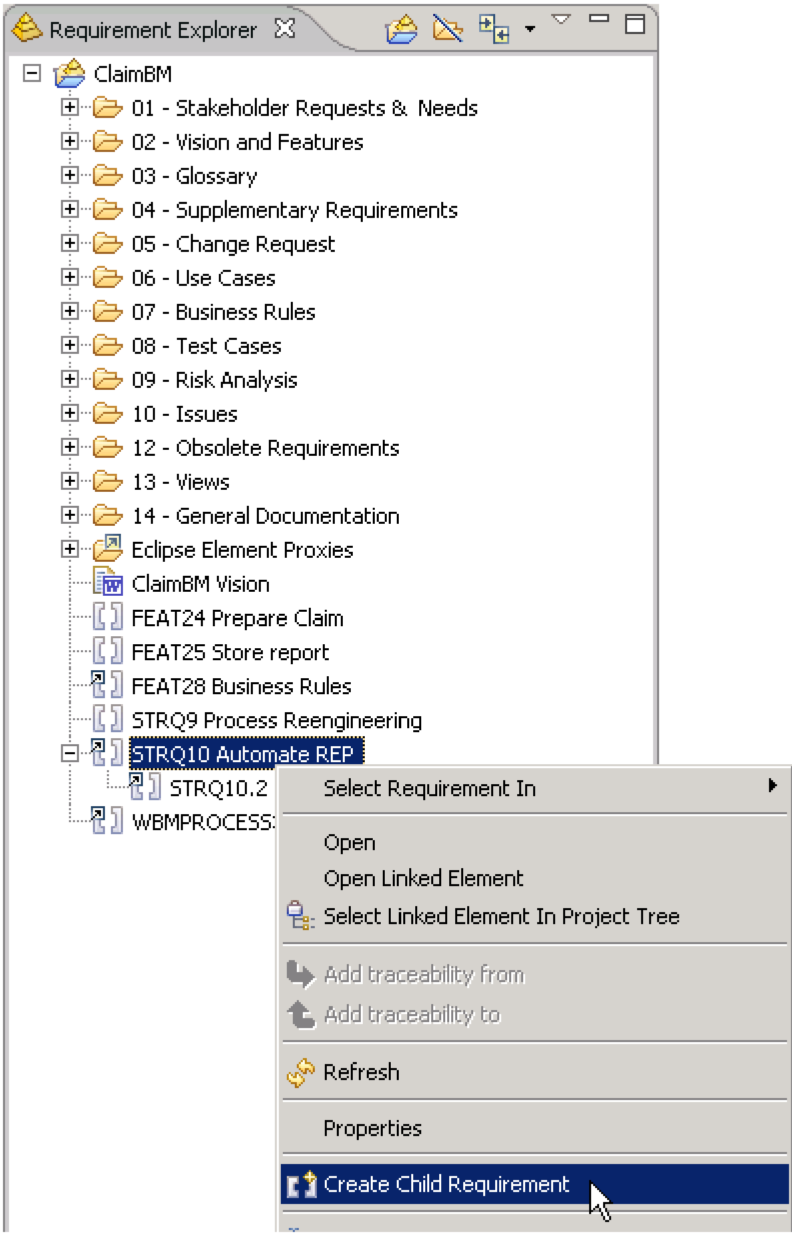
Requirement Creation Policy, and Synchronization Policy. The default settings are sufficient for the ClaimBM Project.



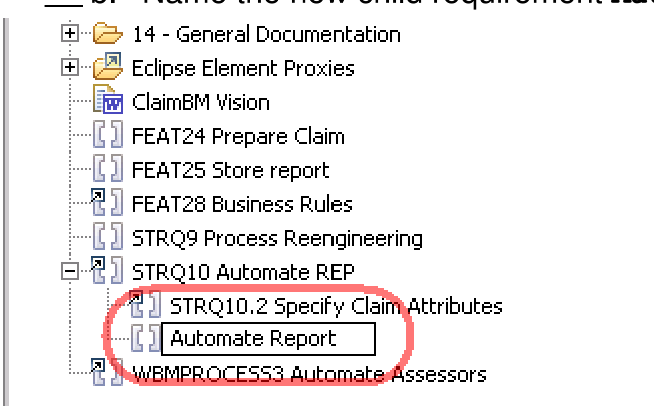
__ e. Click each of the policies listed in the far left and familiarize yourself with these settings. Click **Cancel** when finished.

__ 3. Add a child requirement called **`Automate Report`** to the **STRQ10 Automate REP** requirement.

__ a. Right-click **STRQ10 Automate REP** and select **Create Child Requirement**.



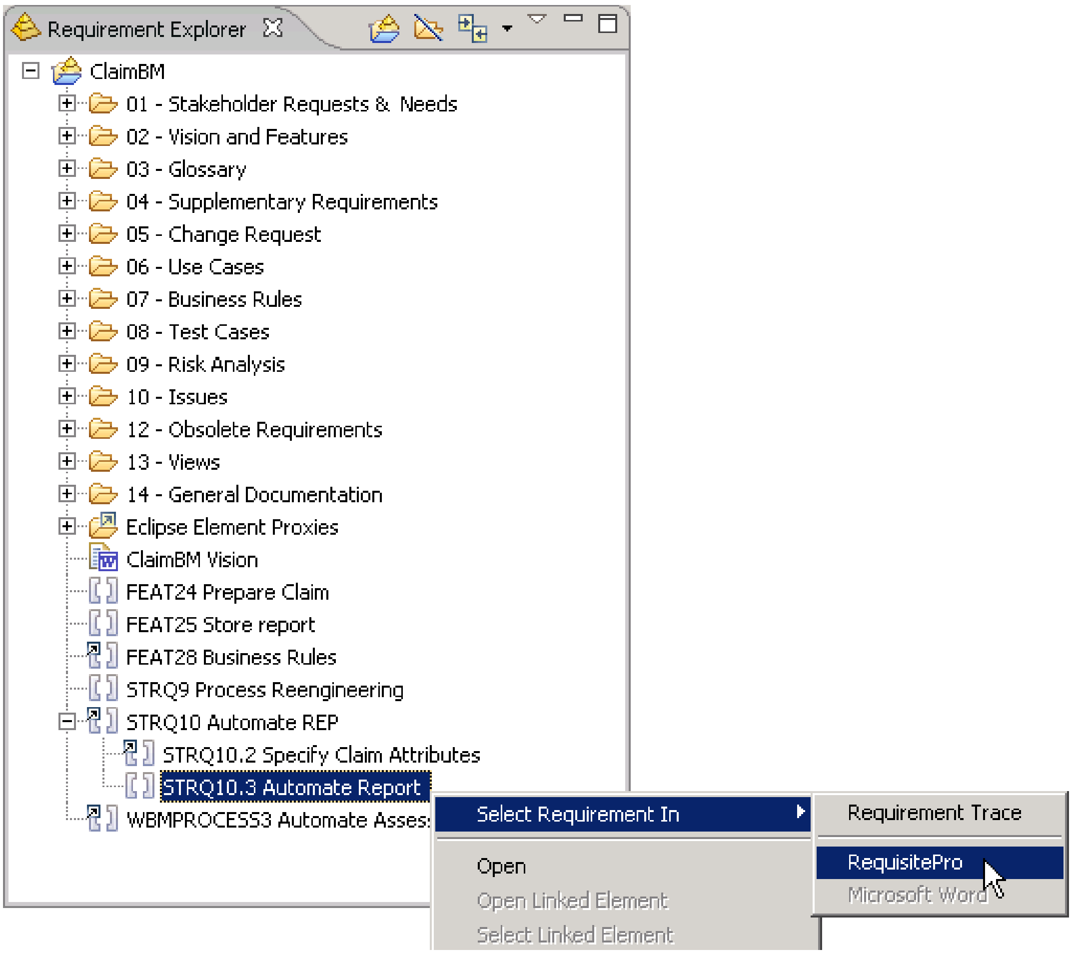
__ b. Name the new child requirement **`Automate Report`** and press [Enter].



The name will automatically be prefixed with STR10.3, indicating that it is a stakeholder child requirement.

__ 4. Change the newly created child requirement's type to a WBMProcess requirement. This also implies that the requirement will cease being a child requirement. To change the type, you will need to launch RequisitePro.

__ a. Right-click **STRQ10.3 Automate Report** and select **Select Requirement In > RequisitePro**.

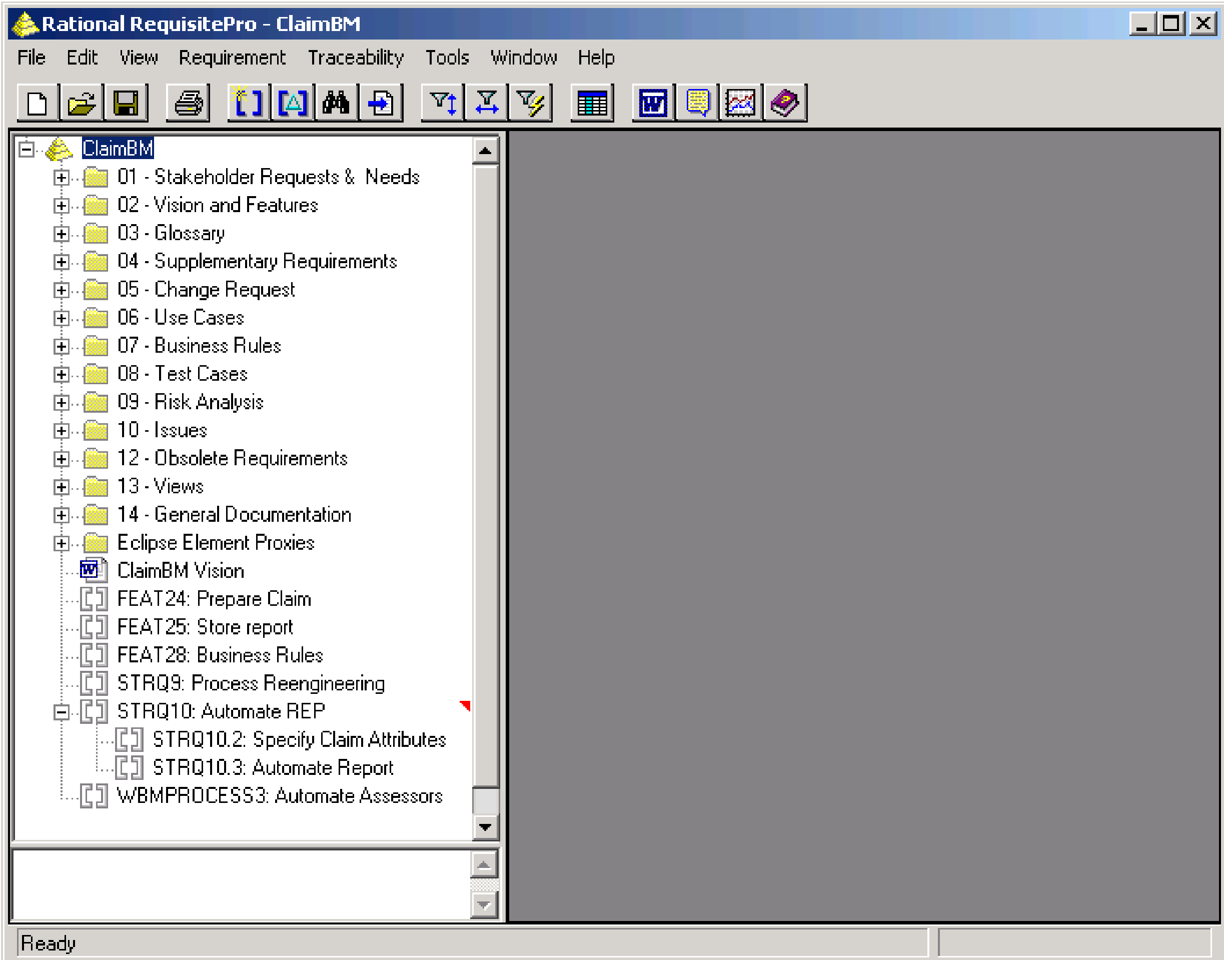


__ b. Click **Yes** when asking to continue with Microsoft Word disabled.

Note

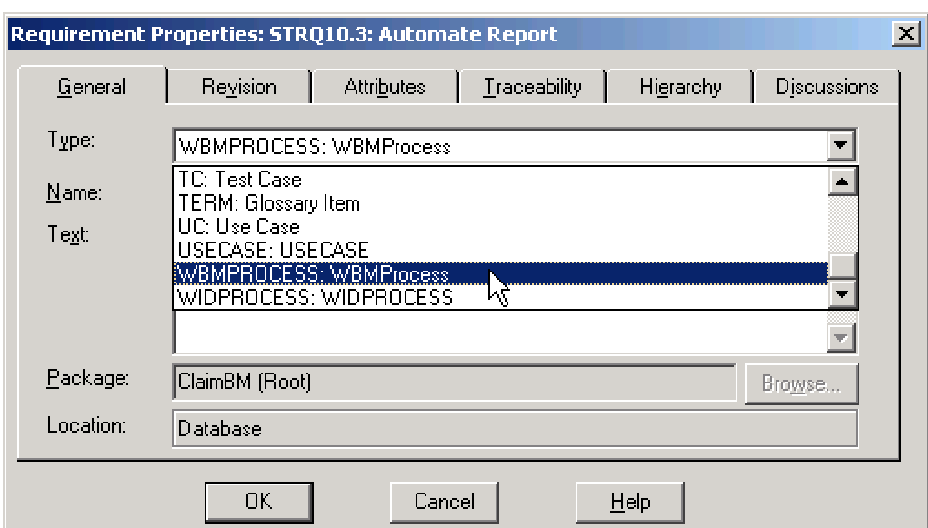
Microsoft Word was not installed in the class VMware image, so you will see a pop-up window for version mismatch error message. If Microsoft Word were installed, you would not see this message.

This launches the ClaimBM project in Rational RequisitePro.

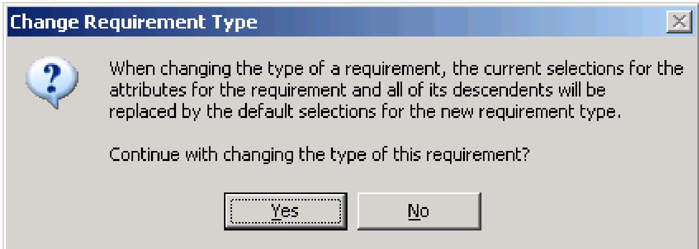


__ c. In Rational RequisitePro, double-click **STRQ10.3 Automate Report**. The **Requirement Properties** window displays.

__ d. In the Type field, select **WBMPROCESS: WBMProcess** from the drop-down menu.



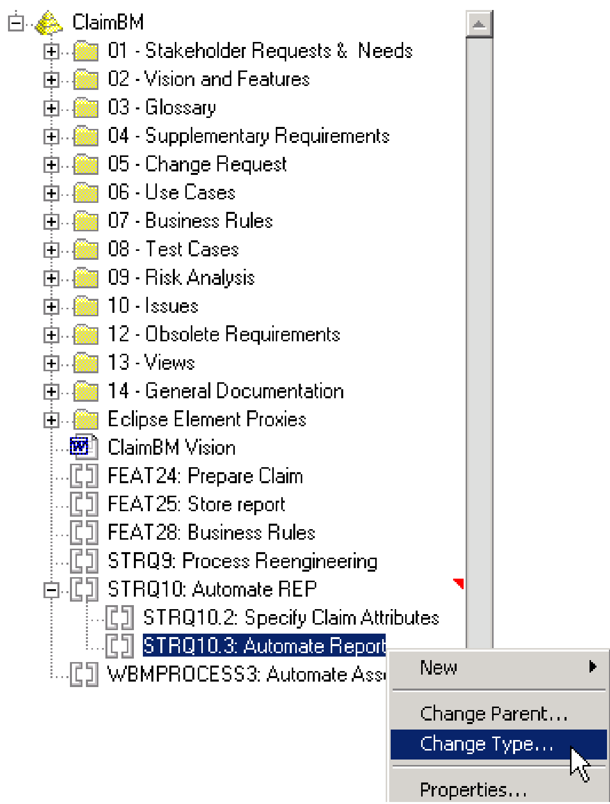
__ e. When the **Change Requirement Type** dialog box displays, click **Yes**.
This message warns you about the changes that will occur as a result of the type change.



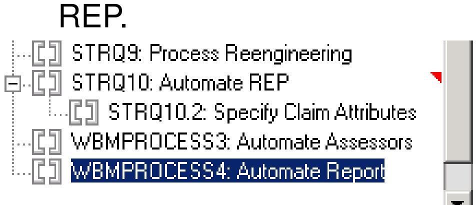
__ f. Click **OK.**

Note

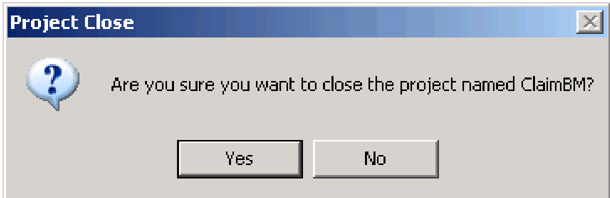
Alternatively, you can change the requirement type by right-clicking the element in Rational RequisitePro and selecting **Change Type**.



__ 5. Note that the requirement is no longer a child requirement of STRQ10 Automate REP.

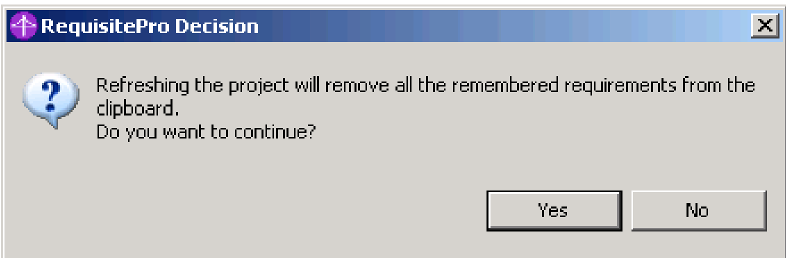


__ 6. Click **File > Exit** to exit Rational RequisitePro. Click **Yes** when asked whether to close the ClaimBM project.

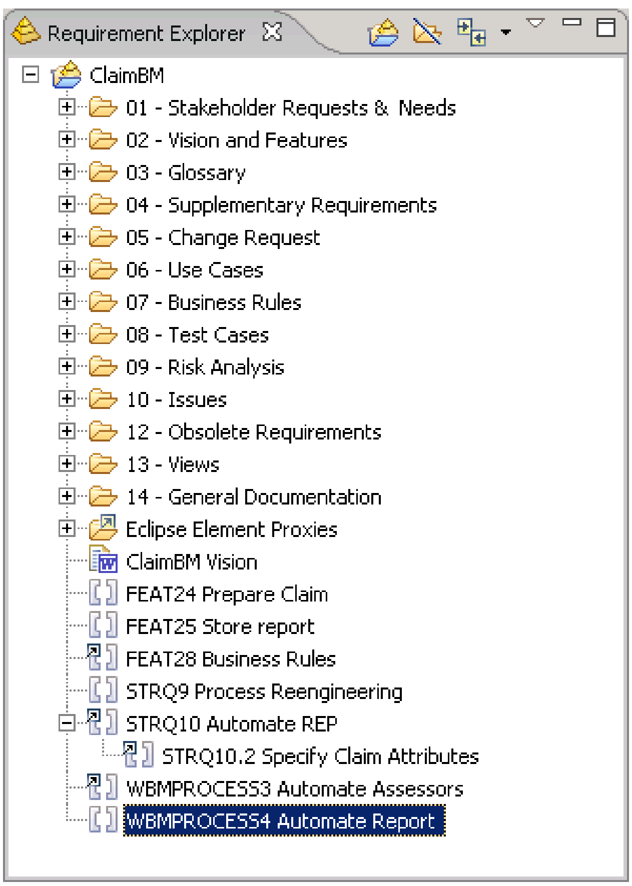


__ 7. In WebSphere Business Modeler, right-click inside the Requirement Explorer and select **Refresh**.

__ 8. Click **Yes** when asked whether to continue with the refresh. This message warns you that the clipboard will be cleared.



__ 9. Verify that the tree has been updated with the type change.



Part 3: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. What are some of the terminology used in the IBM Rational RequisitePro integration?

____

__ 2. How do you gather requirements for a documentation project?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 9. Model validation and static analysis

Estimated time

00:45

What this exercise is about

This exercise covers model validation and static analysis.

What you should be able to do

At the end of the exercise, you should be able to:

- Validate the model
- Perform static analysis

Exercise instructions

WebSphere Business Modeler provides static analysis functions for your models. You can use these analyses to extract information that you have defined in your project to validate your model.

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace: **`C:\workspaces\Lab9_workspace`**

Part 2: Using static analysis from process editor

Sometimes when you have a complex model, it is difficult to detect if there is any task or process which has a missing connection, or has a process path which it is not able to follow.

To make sure that your process diagram has no activities (task, process or service) that are unable to start or have missing connections, you can use the static analysis from the process editor.

Activities unable to start analysis return a list of the activities of the process that cannot start because of problems with their input criteria or with the size of their resource or role requirements.

Creating a valid process is important for simulation and for accurate communication. If there are activities within a model that will never start, you need to be aware of this fact. This analysis is important for any large process model that is being created.

If you complete this analysis and determine from it that one or more activities are modeled in such a way that they are unable to start, you can then make changes to the model to ensure that the deficiency is corrected.

An activity will not start if one of the following conditions is true:

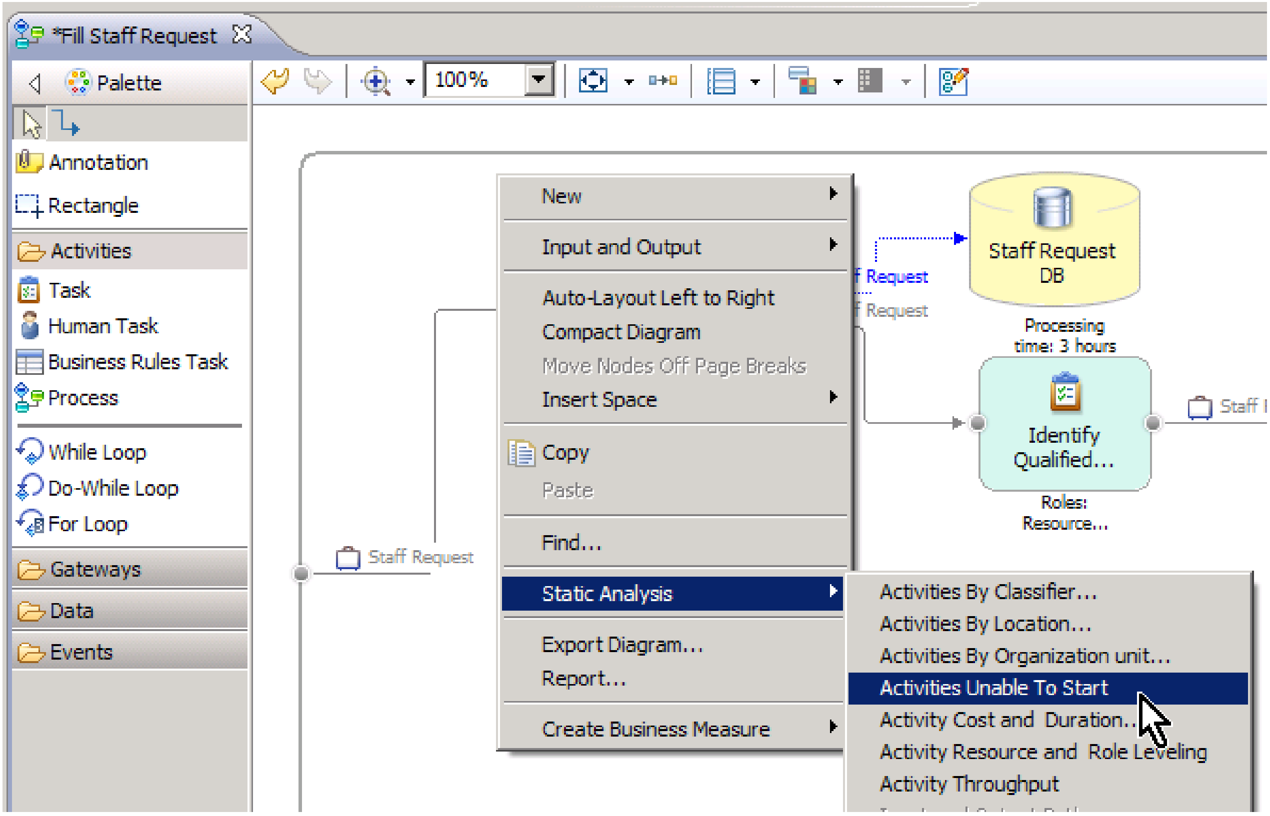
Each input criterion of the activity is found not to be valid for one of the following reasons:

- No inputs are specified.
- One of the inputs of the input criterion does not have an incoming connection (excluding inputs whose input source is a repository or constant value).
- The quantity of required resources or roles is not available.

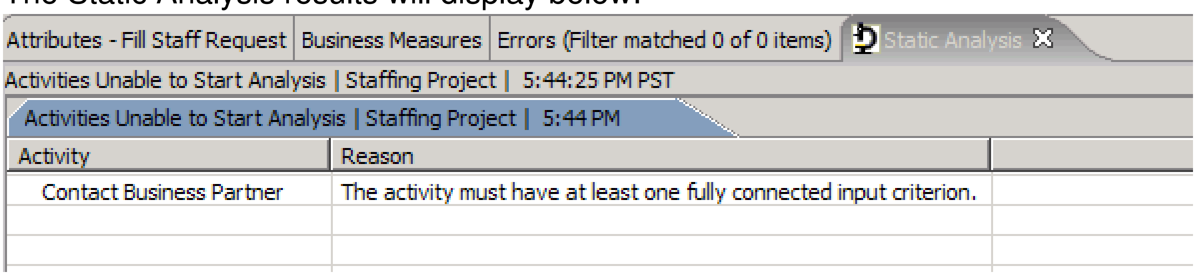
__ 1. From the Project Tree, navigate to **Staffing Project** > **Process Catalog** and double-click **Fill Staff Request** to open the process editor.

__ 2. Make sure that the process is in **Intermediate** mode.

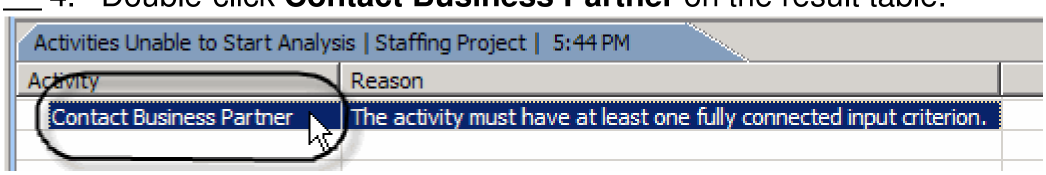
__ 3. In the **process editor** pane, right-click the background of the process diagram and select **Static Analysis > Activity Unable to Start** from the context menu.



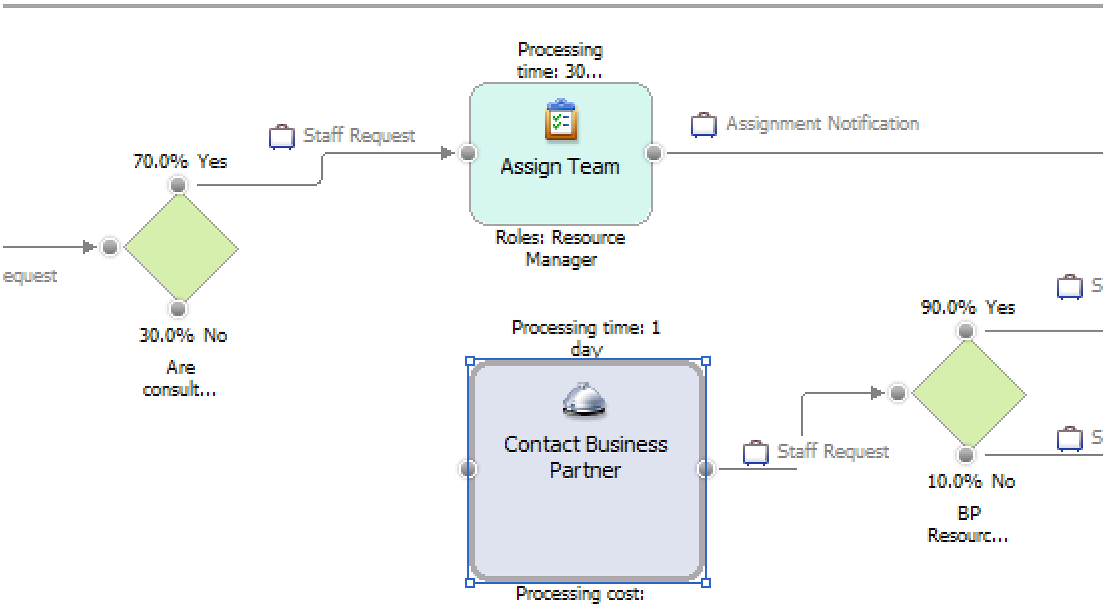
The Static Analysis results will display below:



__ 4. Double-click **Contact Business Partner** on the result table.

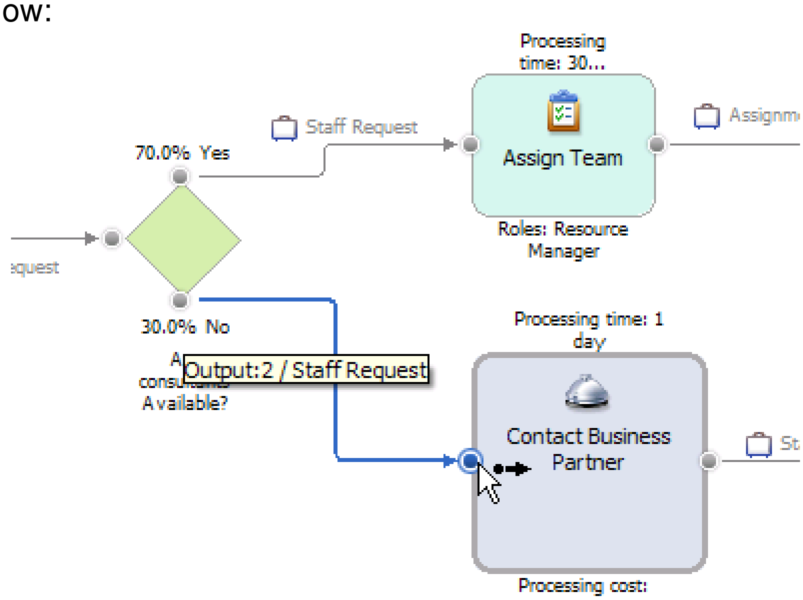


Once you click, the process editor will highlight the selected task and display it in the middle of the editor, so that you can investigate and correct the problem.



There is a missing connection from the output branch of “**No**” and the **Contact Business Partner** services.

__ 5. Connect the output branch of “**No**” to the **Contact Business Partner** services as below:



__ 6. Press Ctrl+S to save.

__ 7. Right-click the result table and select **Rerun > Same view**.

There is no activity listed on your result table.

__ 8. Right-click the **Static Analysis** tab in lower right pane and select **Close**.

Now you will check to see if there is any path in the process that was unable to start.

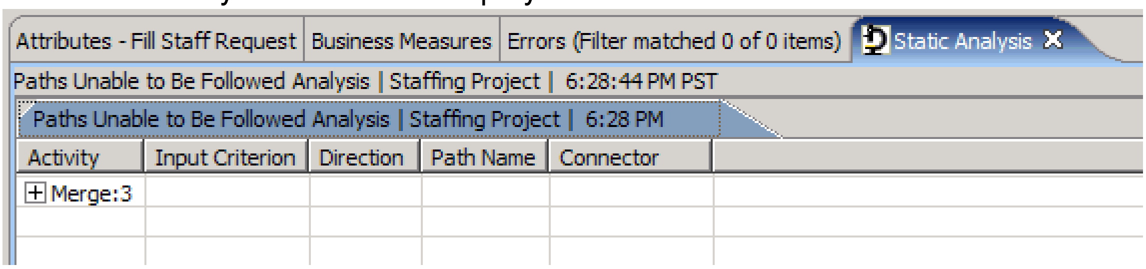
Paths unable to be followed analysis returns a list of the paths within the process that cannot be followed because of an invalid input criterion on an activity in the path.

An input criterion can stop the path of the process flow from being followed for one of the following reasons:

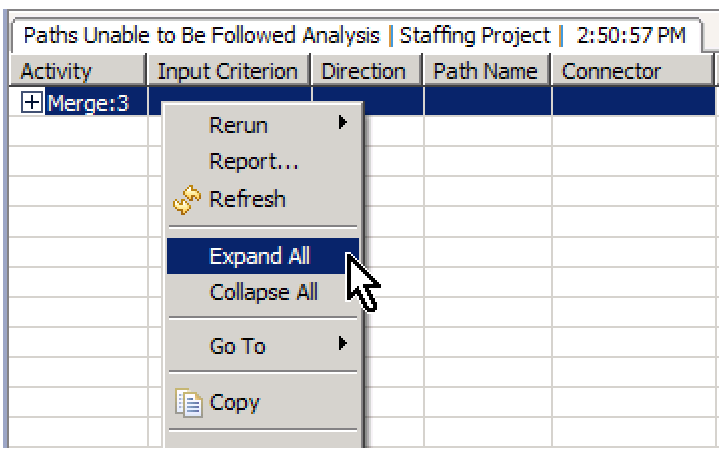
- No inputs are specified for the criterion
- One of the inputs of the input criterion does not have an incoming connector (excluding inputs whose input source is a repository or constant value)

__ 9. In the **process editor** pane, right-click the background and select **Static Analysis > Paths Unable to Be Followed** from the context menu.

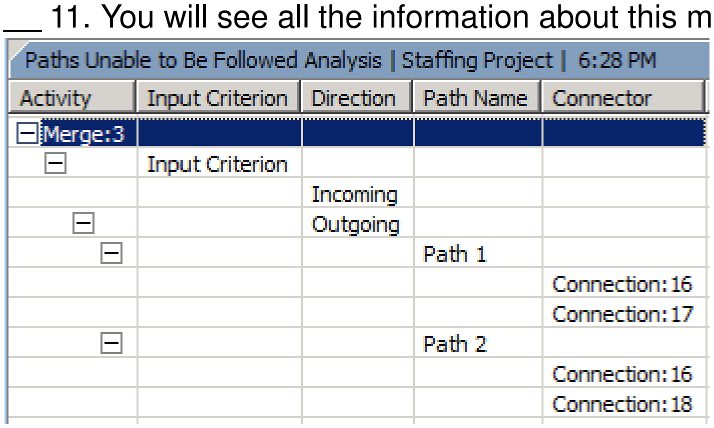
The Static Analysis results will display below:



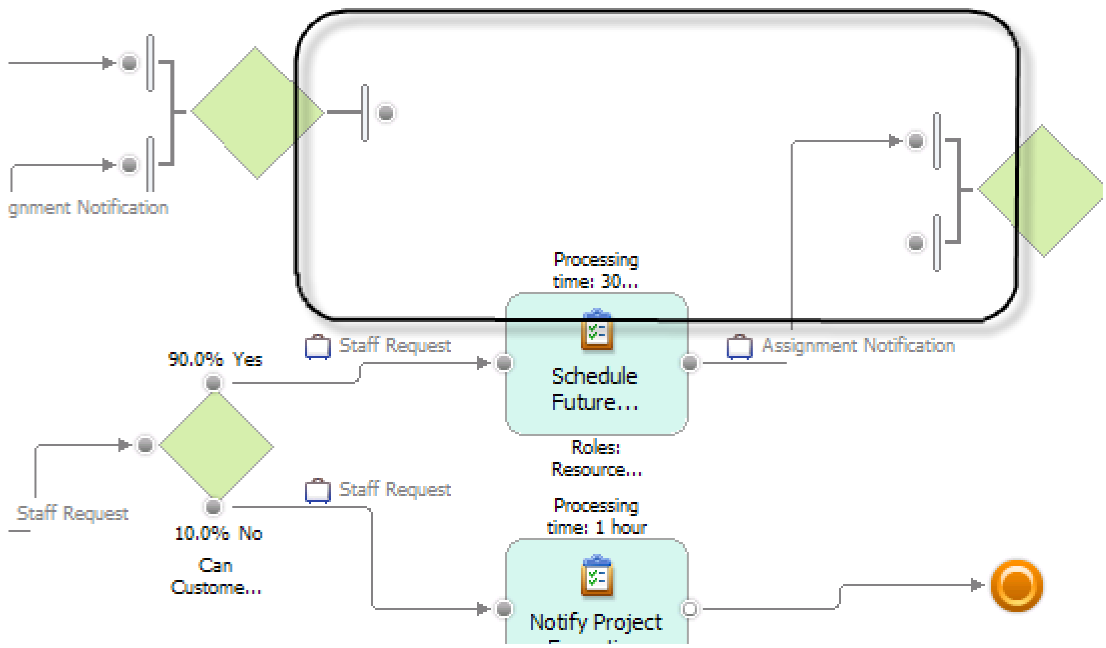
__ 10. Right-click the result table in Static Analysis pane and select **Expand All**.



__ 11. You will see all the information about this merge.

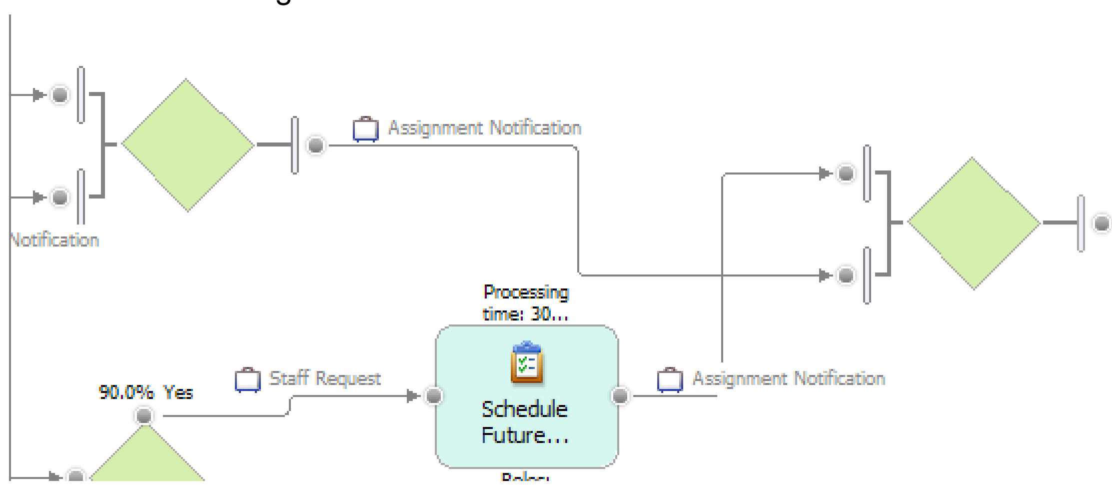


Once it is expanded, the process editor will highlight the selected task and display it in the middle of the editor, so that you can investigate and correct the problem.

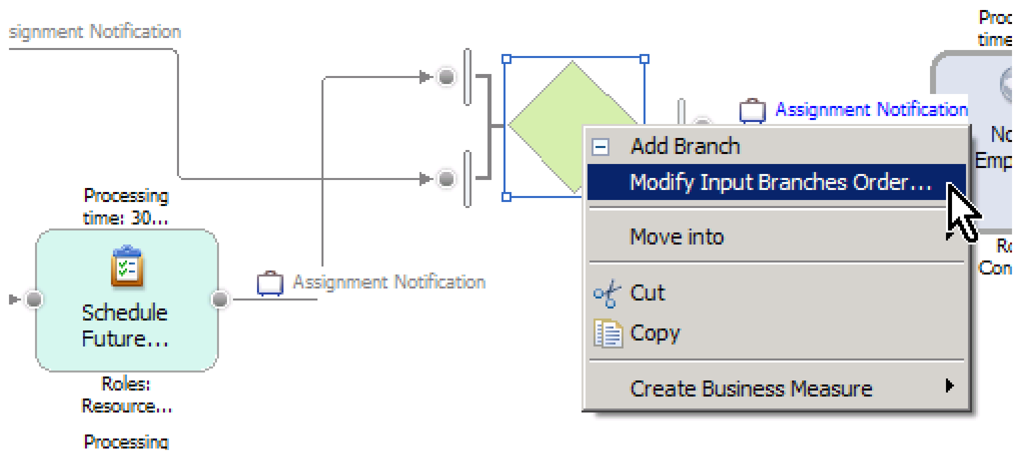


There is a missing connection between the merges.

__ 12. Connect the merges as below:



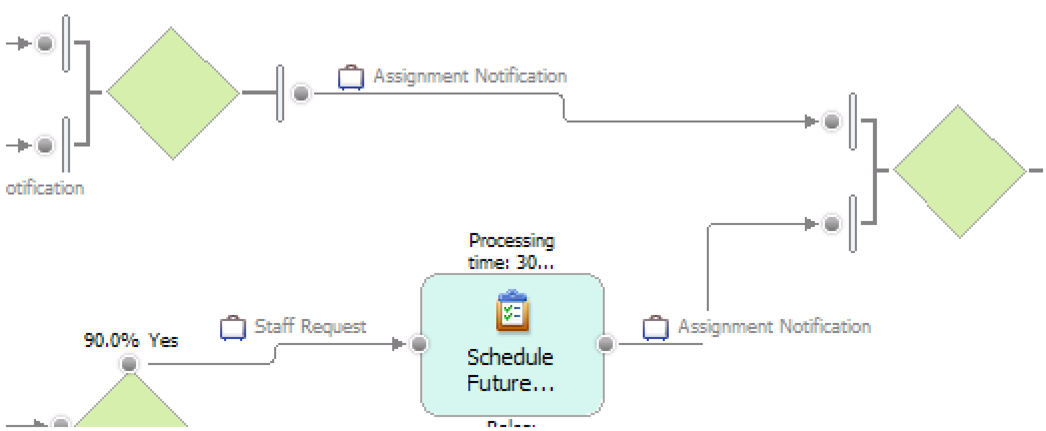
__ 13. To uncross the connections, right-click the merge, and select **Modify Input Branches Order**



__ 14. Select **Input Branch**, and click **Move Up.**

__ 15. Click **OK**.

__ 16. The connection is no longer crossing.



__ 17. Press **Ctrl+S** to save.

__ 18. Right-click the result table and select **Rerun > Same view**.

There is no activity listed on your result table.

__ 19. Right-click the **Static Analysis** tab and select **Close**.

Part 3: Generating activity cost and duration analysis

Activity cost and duration analysis returns the cost of each activity as a sum of the average costs of the allocated resources. It also computes the total working duration of the allocated resources of each activity, and the minimum working duration of the activity.

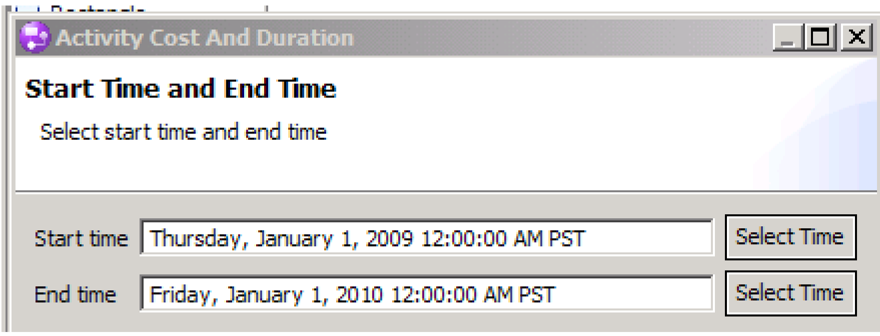
This analysis helps you to identify which activities have the potential of costing the most and taking the longest to complete. This enables you to focus attention on possible cost savings and time saving opportunities.

Note: Requirements for resource definitions are not considered in this analysis.

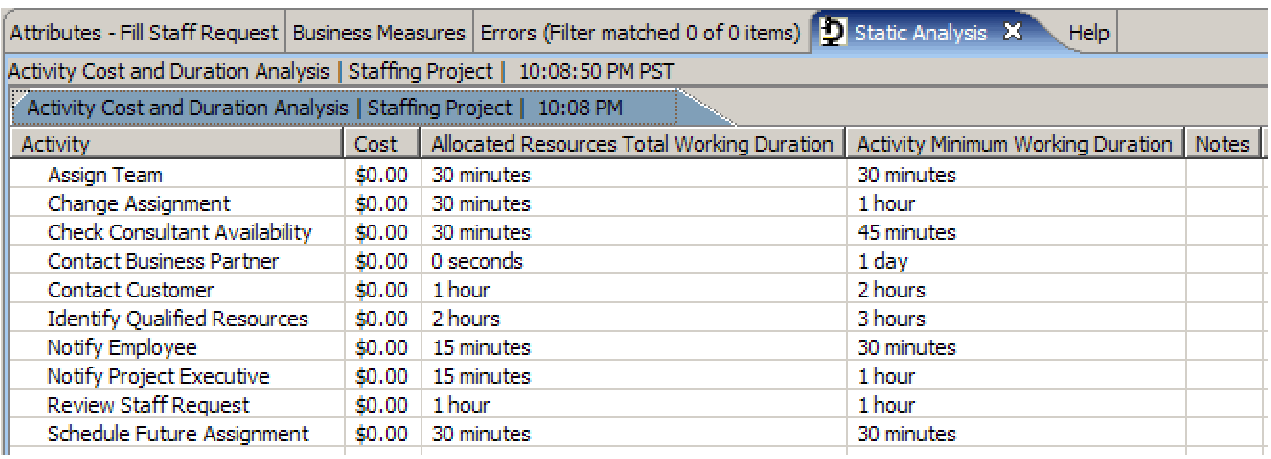
Note: If an activity's processing cost, startup cost, or processing time are specified as distributions, this analysis will not evaluate the values. Distribution is used by simulation.

__ 1. In the **process editor** pane, right-click the background of the process diagram and select **Static Analysis > Activity Cost and Duration** from the context menu.

__ 2. Click **Finish** to accept the default start and end time.



The analysis results display in the bottom-right pane:



Activity	Cost	Allocated Resources Total Working Duration	Activity Minimum Working Duration	Notes
Assign Team	$0.00	30 minutes	30 minutes	
Change Assignment	$0.00	30 minutes	1 hour	
Check Consultant Availability	$0.00	30 minutes	45 minutes	
Contact Business Partner	$0.00	0 seconds	1 day	
Contact Customer	$0.00	1 hour	2 hours	
Identify Qualified Resources	$0.00	2 hours	3 hours	
Notify Employee	$0.00	15 minutes	30 minutes	
Notify Project Executive	$0.00	15 minutes	1 hour	
Review Staff Request	$0.00	1 hour	1 hour	
Schedule Future Assignment	$0.00	30 minutes	30 minutes	

Note that these values were assigned during the previous labs.

Note

You can click the activity in the table and it will move the diagram and select the activity. You can also click the attributes of that activity and look inside and then return to the static analysis table by clicking the static analysis tab.

__ 3. Right-click the **Static Analysis** tab and select **Close**.

Part 4: Generating activities by classifier analysis

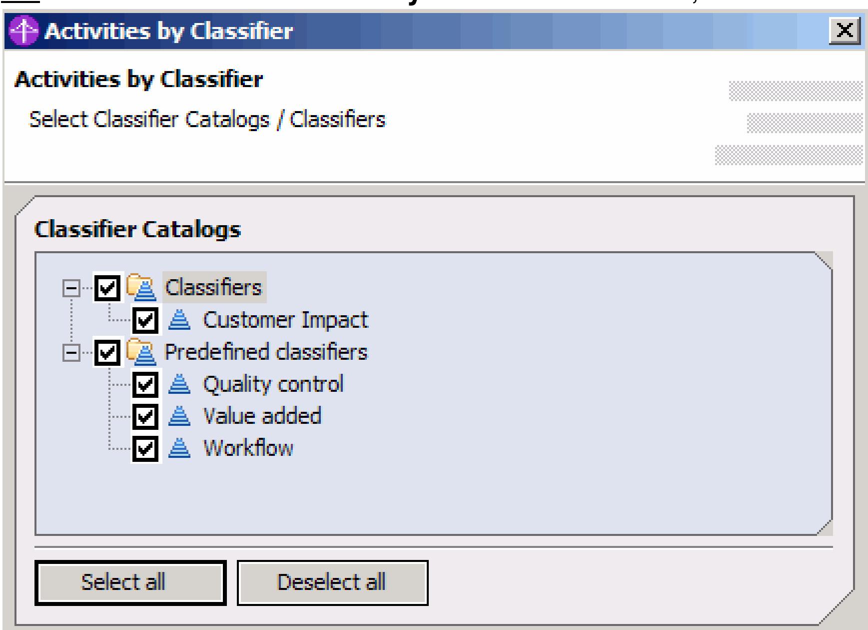
Activities by classifier analysis returns the activities of the process that are associated with each classifier value of selected classifiers.

Use this analysis to gain an understanding of which activities share common classifier values and help you to focus on those activities that have a common quality or behavior. For example, if your focus is to eliminate manual tasks, you can use this analysis to isolate those tasks that are manual from those that are automated.

Processes are multidimensional in nature and understanding the process from a specific dimension or classification enables you to dissect and evaluate the process with increased ease. In the process, you can use the Value added classifier to categorize activities under the values Business value added, Real value added, and No value added. When you run this analysis, you can see the activities associated with each of these three values. Alternatively, if you create your own classifier and classifier values to categorize activities that send or receive data to or from the global repositories in your project, you can then use this analysis to display which activities are associated with each repository.

__ 1. Right-click the background of the process diagram and select **Static Analysis** > **Activities by Classifier**.

__ 2. From the **Activities by Classifier** window, click **Select all.**



__ 3. Click **Finish**.

Analysis results appear in the Analysis view.

__ 4. Right-click the result table and select **Expand all**:

Activities by Classifier Analysis | Staffing Project | 7:06 PM

Classifier	Classifier Value	Activity
Customer Impact		
	High	
		Check Consultant Availability
		Notify Project Executive
	Low	
		Notify Employee
Value added		
	Real Value Added	
		Review Staff Request
		Schedule Future Assignment

The activities by classifier analysis returns the activities of the process that are associated with each classifier value of selected classifiers.

__ 5. Right-click the **Static Analysis** tab and select **Close**.

Part 5: Generating activities by organization unit analysis

Activities by organization unit analysis returns the activities of the process that are performed by each organization unit.

Use this analysis to gain a picture of which activities are carried out by which organization units.

Understanding activity distribution by organization unit enables you to determine the relative contribution to the process of each organization unit. For example, if you find that a particular organization unit is responsible for a large number of the activities, then you can take action to ensure that funding is directed appropriately, or tasks moved to more evenly distribute the workload across the units.

__ 1. In the **process editor** pane, right-click the background of the process diagram and select **Static Analysis > Activities by Organization Unit** from the context menu.

__ 2. From the **Activities by Organization Unit** window, click **Select all.**

__ 3. Click **Finish**.

Analysis results appear in the Analysis view.

__ 4. Right-click the result table and select **Expand all**:

Activities By Organization unit Analysis | Staffing Project | 7:08 PM

Organization Unit	Activity
Consulting Services	
	Review Staff Request
	Notify Project Executive
	Notify Employee
Human Resources	
	Check Consultant Availability
	Assign Team
	Schedule Future Assignment
	Notify Employee

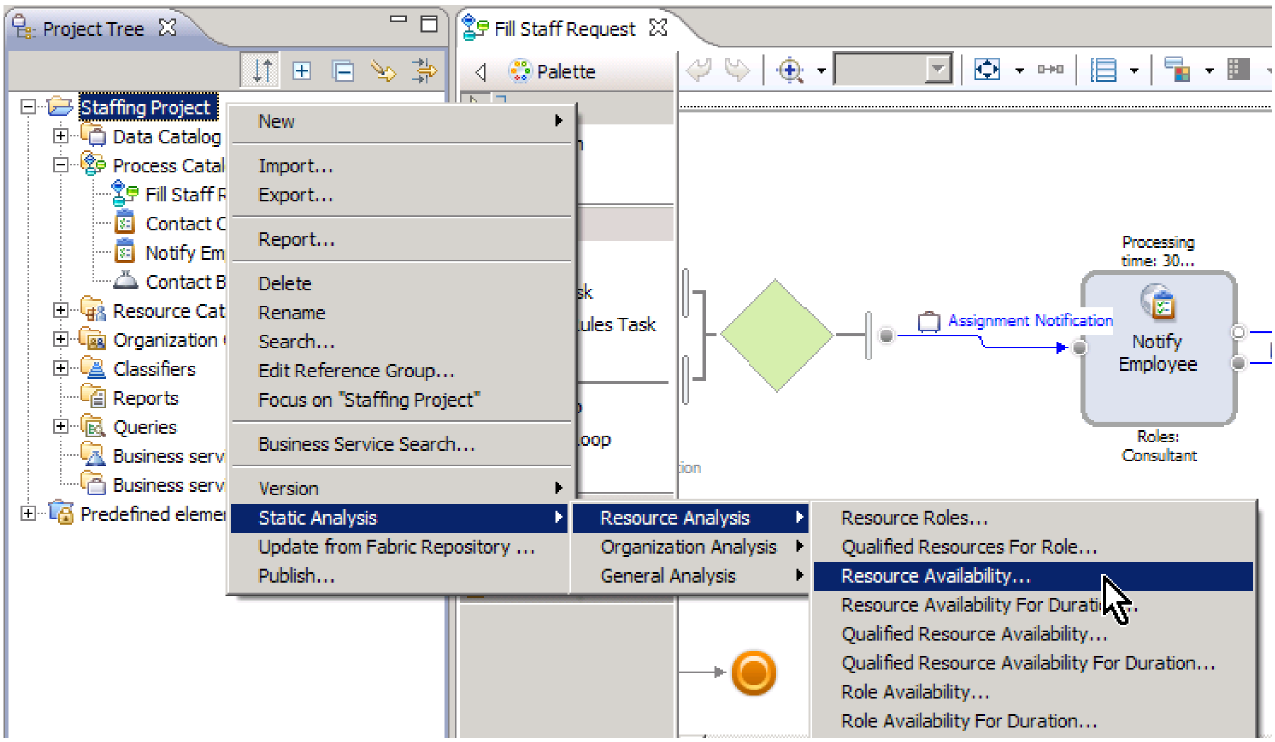
__ 5. Right-click the **Static Analysis** tab and select **Close**.

Part 6: Generating for resource availability analysis

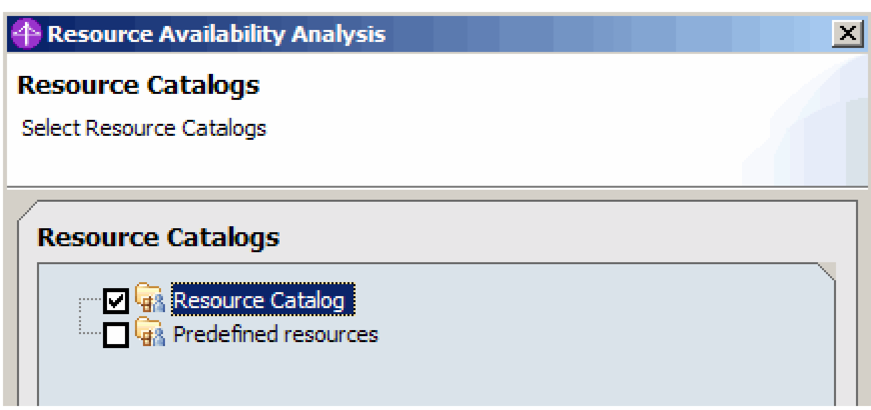
Resource availability analysis determines the periods during which a selected resource is available, beginning and ending with times that you specify.

The availability of a resource is identified by the intervals specified in its availability timetable, after excluding the exempted periods and considering the validity periods.

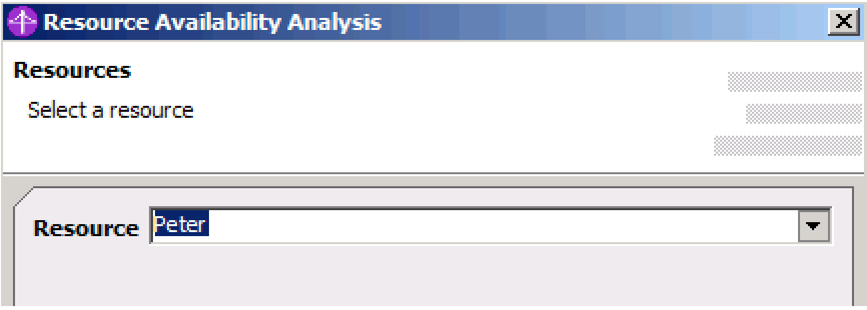
__ 1. Right-click **Staffing Project** in the Project Tree and select **Static Analysis > Resource Analysis > Resource Availability**.



__ 2. Select **Resource Catalog** and click **Next**.



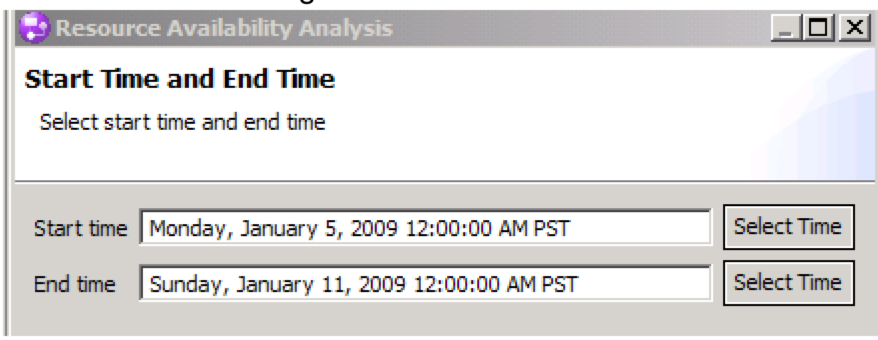
__ 3. Select **Peter** from the **Resource** drop-down list.



__ 4. Click **Next.**

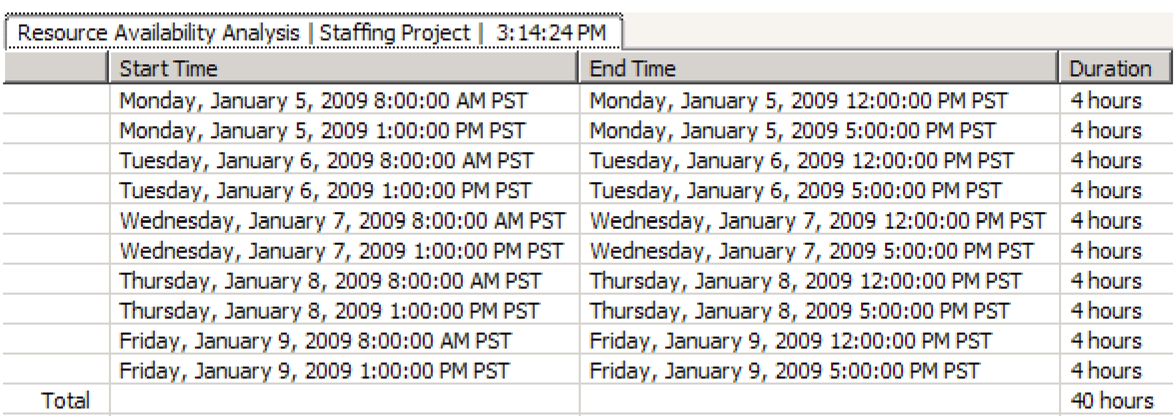
__ 5. Make sure **Start Time** is **`Monday, January 5, 2009 12:00:00 A.M.`** Do not change the Time Zone field.

__ 6. Click **Select Time** next to **End Time** and enter **`Sunday, January 11, 2009 12:00:00 A.M.`** Do not change the Time Zone field.



__ 7. Click **Finish**.

The analysis results are displayed:



Resource Availability Analysis | Staffing Project | 3:14:24 PM

	Start Time	End Time	Duration
	Monday, January 5, 2009 8:00:00 AM PST	Monday, January 5, 2009 12:00:00 PM PST	4 hours
	Monday, January 5, 2009 1:00:00 PM PST	Monday, January 5, 2009 5:00:00 PM PST	4 hours
	Tuesday, January 6, 2009 8:00:00 AM PST	Tuesday, January 6, 2009 12:00:00 PM PST	4 hours
	Tuesday, January 6, 2009 1:00:00 PM PST	Tuesday, January 6, 2009 5:00:00 PM PST	4 hours
	Wednesday, January 7, 2009 8:00:00 AM PST	Wednesday, January 7, 2009 12:00:00 PM PST	4 hours
	Wednesday, January 7, 2009 1:00:00 PM PST	Wednesday, January 7, 2009 5:00:00 PM PST	4 hours
	Thursday, January 8, 2009 8:00:00 AM PST	Thursday, January 8, 2009 12:00:00 PM PST	4 hours
	Thursday, January 8, 2009 1:00:00 PM PST	Thursday, January 8, 2009 5:00:00 PM PST	4 hours
	Friday, January 9, 2009 8:00:00 AM PST	Friday, January 9, 2009 12:00:00 PM PST	4 hours
	Friday, January 9, 2009 1:00:00 PM PST	Friday, January 9, 2009 5:00:00 PM PST	4 hours
Total			40 hours

Resource availability analysis determines the periods during which a selected resource is available, beginning and ending with times that you specify. The availability of a resource is identified by the intervals specified in its availability time table, after excluding the exempted periods and considering the validity periods.

__ 8. Right-click the **Static Analysis** tab and select **Close**.

Part 7: Generating resources costs summary analysis

__ 1. Right-click the **Staffing Project** in the Project Tree and select **Static Analysis > Resource Analysis > Resources Costs Summary**.

__ 2. Select **Resource Catalog** and click **Next**.

__ 3. Click **Finish** to accept the default start and end time.

The **resources costs summary analysis** results are displayed:

Resources Costs Summary Analysis | Staffing Project | 3:15:24 PM

Resource Name	Ave...	A.	A...	Average Cost...	Total Duration	Total Cost ...	Annual...	Annual Per Time Unit Cost
Maria	$0.00			$65.00 / Hour	2088 hours	$135,720.00	2,093	$136,045.00
Michael	$0.00			$125.00 / Hour	2088 hours	$261,000.00	2,093	$261,625.00
Peter	$0.00			$55.00 / Hour	2088 hours	$114,840.00	2,093	$115,115.00
Sophia	$0.00			$85.00 / Hour	2088 hours	$177,480.00	2,093	$177,905.00

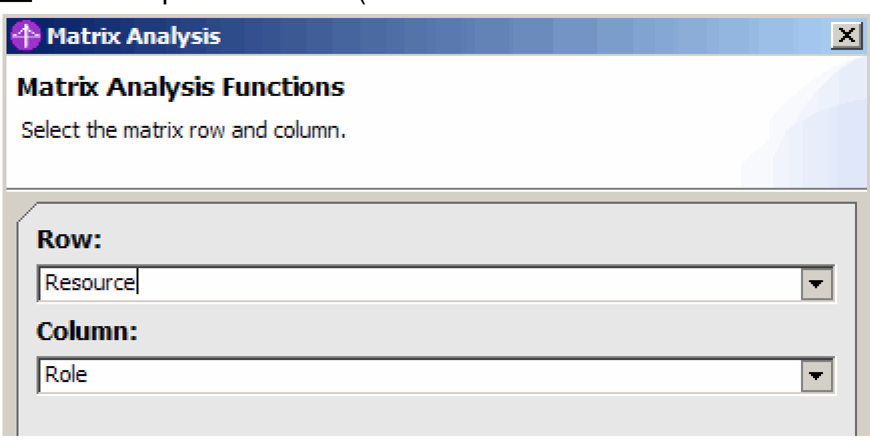
The resources costs summary analysis determines the costs of multiple resources for all periods during which the resources are available between a specified start and end time.

__ 4. Right-click the **Static Analysis** tab and select **Close**.

Part 8: Generating matrix analysis

__ 1. Right-click **Staffing Project** in the **Project Tree** and select **Static Analysis > General Analysis** > **Matrix Analysis.**

__ 2. Accept the default (**Resource** for **Row** and **Role** for **Column**) and click **Next**.



__ 3. Select **Resource Catalog** and click **Finish**.

The **matrix analysis** results are displayed:

Matrix Analysis | Staffing Project | 7:43:01 PM PST

Matrix Analysis | Staffing Project | 7:43 PM

	Resource Manager	Project Executive	Consultant	Project Manager
Maria	X			
Michael		X		
Peter			X	
Sophia				X

The matrix analysis shows the associations between model elements of two different selected types (in this case, `Resource` and `Role`).

Note

In some cases, the rows and columns of the matrix analysis are interchangeable.

Example:

Matrix Analysis | Staffing Project | 8:11:27 PM EDT

Matrix Analysis | Staffing Project | 8:09 PM   Matrix Analysis | Sta

	Peter	Michael	Sophia	Maria
Consultant	X			
Project Executive		X		
Project Manager			X	
Resource Manager				X

__ 4. Right-click the **Static Analysis** tab and select **Close**.

__ 5. Save changes (Ctrl+S).

Part 9: Review activity

In this part of the exercise, you will be performing your own static analysis to obtain the results described below.

__ 1. Based on what you have learned so far, perform static analysis to determine which business items are associated with each element in a process.

Which static analysis did you use? ____________________________________

__ 2. Continue to the next page for hints and solutions only after you have made an effort to complete the two activities described above.

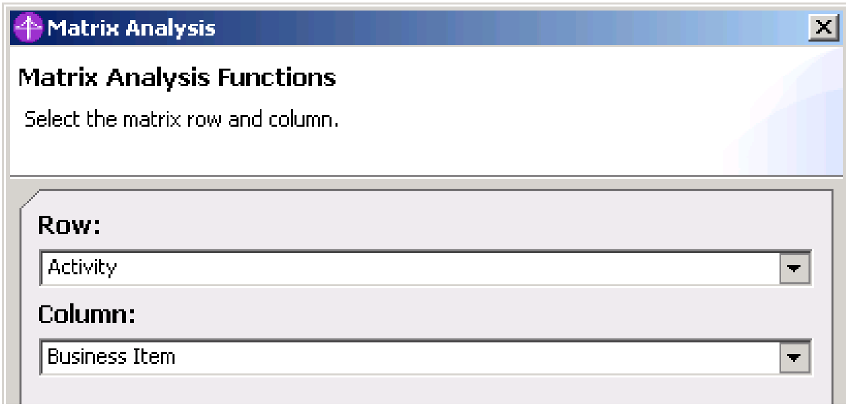
Part 10: Solution to review activity

__ 1. Hint: Use matrix analysis.
You are encouraged to attempt this on your own before continuing with the solution.

__ a. Right-click from the Project Tree and select **Static Analysis** > **General Analysis** > **Matrix Analysis**.

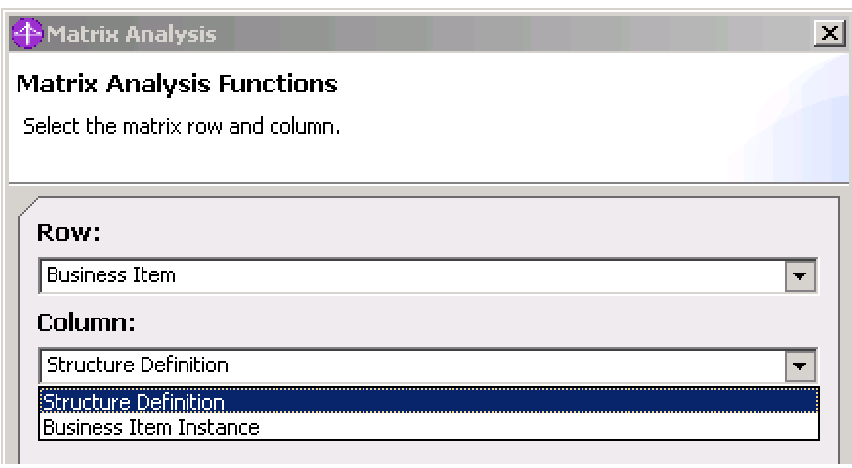
__ b. Under **Row**, select **Activity**.

__ c. Under **Column**, select **Business Item** and click **Next**.



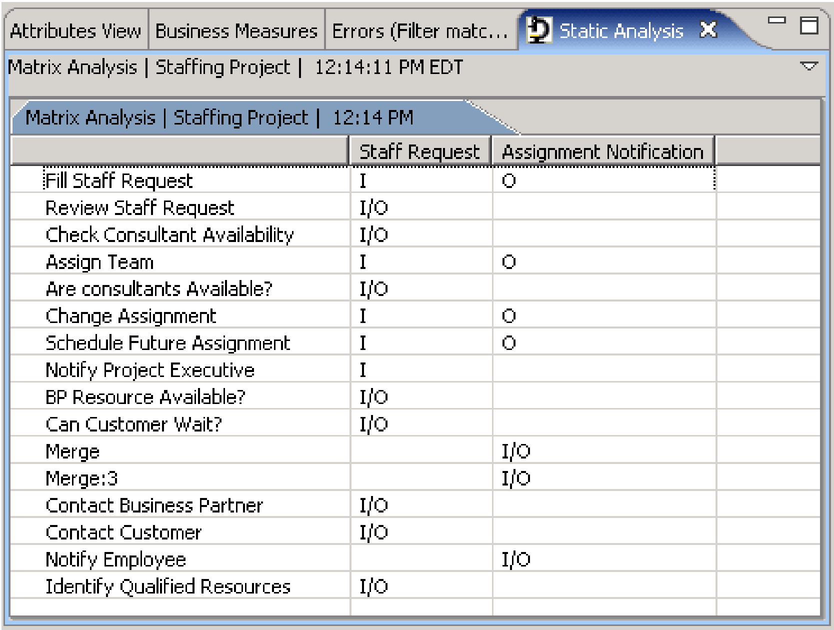
Note

In this case, the row and column are **not** interchangeable. If you select **Business Item** under **Row**, the options for **Column** will be limited to **Structure Definition** and **Business Item Instance**.



__ d. Select **Process Catalog** and click **Next**.

__ e. For **Process activity**, verify that **Fill Staff Request** is selected and click **Finish**. The matrix analysis results are displayed.



	Staff Request	Assignment Notification
Fill Staff Request	I	O
Review Staff Request	I/O	
Check Consultant Availability	I/O	
Assign Team	I	O
Are consultants Available?	I/O	
Change Assignment	I	O
Schedule Future Assignment	I	O
Notify Project Executive	I	
BP Resource Available?	I/O	
Can Customer Wait?	I/O	
Merge		I/O
Merge:3		I/O
Contact Business Partner	I/O	
Contact Customer	I/O	
Notify Employee		I/O
Identify Qualified Resources	I/O	

"I" stands for Input, and "O" stands for output.

Part 11: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. Name the static analysis that includes the names of the connectors on the path.

____

__ 2. In the Resources costs summary report, there is a column called Annual Per Time Unit Cost. How does Modeler derive this value?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 10.Basic reports and queries

Estimated time

00:30

What this exercise is about

This exercise covers basic reports and queries.

What you should be able to do

At the end of the exercise, you should be able to:

- Generate and export a predefined report
- Run a predefined query
- Print the process diagram

Exercise instructions

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab10_workspace`

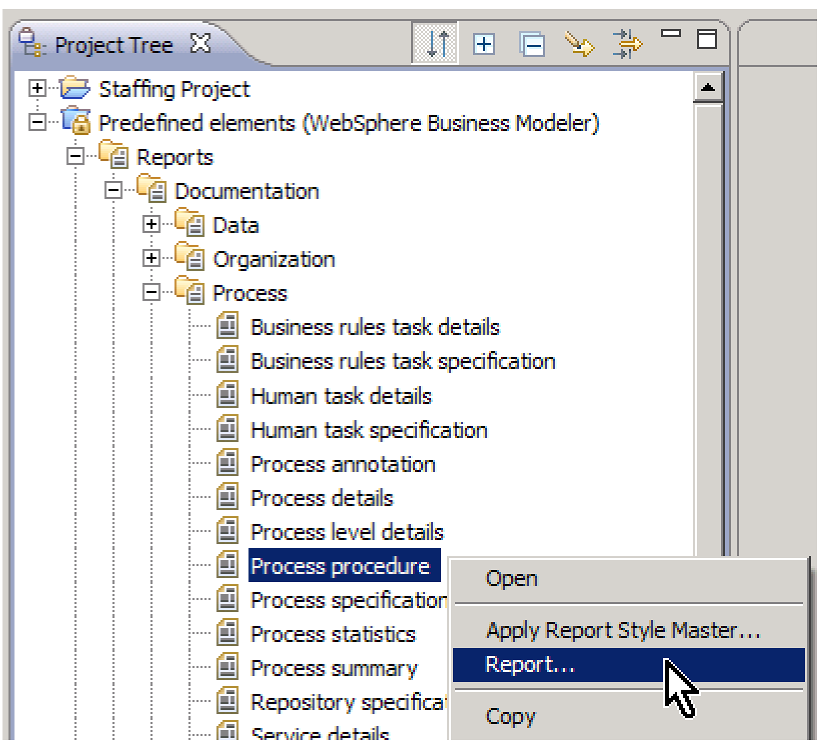
Part 2: Generating and exporting predefined report

Reports provide a way for you to view, share and print information derived from the models you have created. A variety of predefined report templates are provided that can be used to generate reports. Additionally, you can design your own reports.

You can export your reports to Adobe PDF or Microsoft Word (.docx) formats.

The Process procedure report shows the sequence of steps within a process and the relationships of a process to other processes.

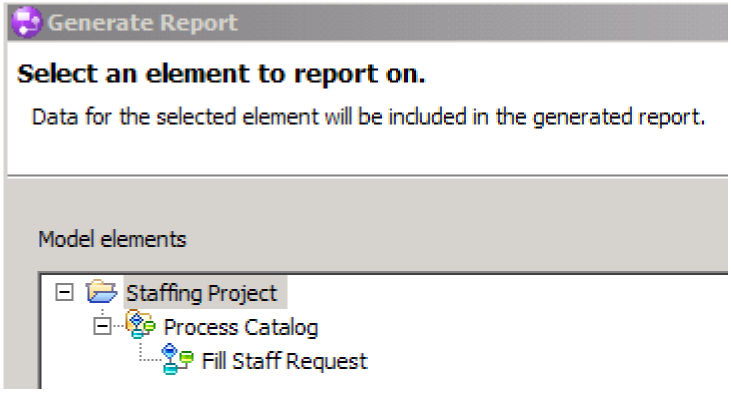
__ 1. From the Project Tree, expand **Predefined elements (WebSphere Business Modeler) > Reports > Documentation > Process**. Right-click **Process Procedure** and select **Report**.



__ 2. Select **Preview only.**

__ 3. Click **Next.**

__ 4. Select **Staff Project > Process Catalog > Fill Staff Request**.



__ 5. Click **Next.**

__ 6. At the **Specify values for Parameter fields**, select each parameter field, and enter the following information in the **Parameter Field Value**:

Company Address: `123 Pacific Drive, San Francisco, CA 94015`

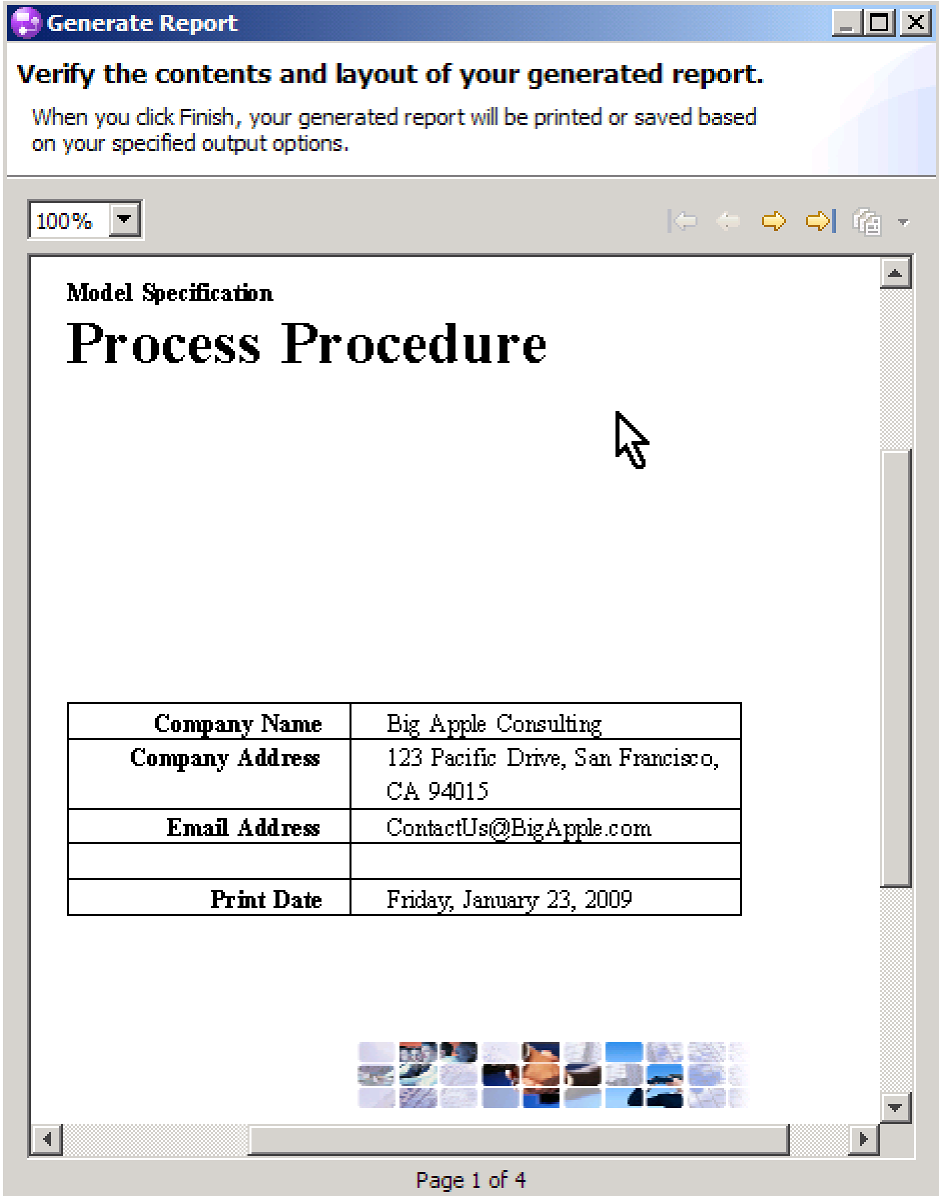
Company E-mail: `ContactUs@BigApple.com`

Company Name: `Big Apple Consulting`

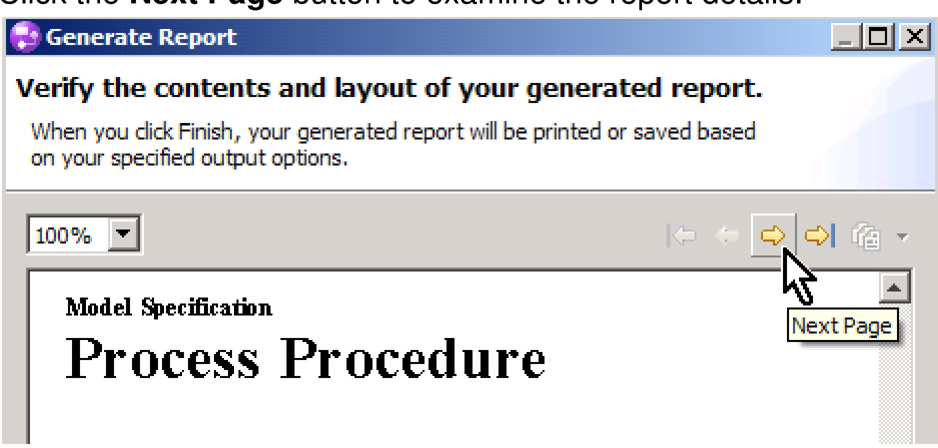
__ 7. Click **Next**.

This will take a few moments.

A **Preview** displays the report.



__ 8. Click the **Next Page** button to examine the report details.



___ 9. Go to page 3 to examine the Connection steps for process.

Connection Steps For Process

Procedure	Step	Role	Type	Next	Description
1	Review Staff Request	Project Manager	Task (l)	2	Project manager and Project executive review the staff request and log the staff request for tracking purposes in the database. Resource manager will identify the qualified resources (consultants or technician) based on skills and experience.
2	Identify Qualified Resources	Resource Manager	Task (l)	3	
3	Check Consultant Availability	Resource Manager	Task (l)	4	
4	Are consultants Available?		Decision (e)	5,9	
5	Assign Team	Resource Manager	Task (l)	6	
6	Merge		Merge	7	
7	Merge 3		Merge	8	
8	Notify Employee	Consultant	Task (g)		Notify the consultant with the assignement
9	Contact Business Partner		Service (g)	10	Contact the business partner to fill the request
10	BP Resource Available?		Decision (e)	11,12	
11	Change Assignment	Resource Manager	Task (l)	6	Change assignment to use Business Partner resources
12	Contact Customer	Project Manager	Task (g)	13	Contact customer when business partner is not able to provide resources
13	Can Customer Wait?		Decision (e)	14,15	

IBM.

Page 3 of 4

This report includes the following information about the process or multiple processes in a process catalog that you select for inclusion in the report:

- Process name
- Catalog
- Description
- Names of other processes that use this process
- Inputs
- Outputs
- Details on each step within the process:
  - Step number
  - Step name
  - Role
  - Type (such as task, decision, or loop)

- Next step
- Description

__ 10. Click **Finish** to close the **Preview** window.

The business item utilization report identifies all the business items in a model, including information about the utilization of each business item.

You will generate and export the business item utilization report in PDF format. When you export a report to PDF format, a PDF file adhering to the PDF 1.4 specifications is created. This level PDF is compatible with Abobe Acrobat reader Version 5 and later, as well as a wide variety of other readers and editors.

__ 11. From the Project Tree, expand **Predefined elements (WebSphere Business Modeler) > Reports > Documentation > Data**. Right-click **Business item utilization** and select **Report**.

__ 12. Select **Preview and save.**

__ 13. Select **PDF(.pdf)** for save format.

__ 14. Enter **Business item utilization** as Report name.

__ 15. Click **Browse** to select **My Document** as Folder.

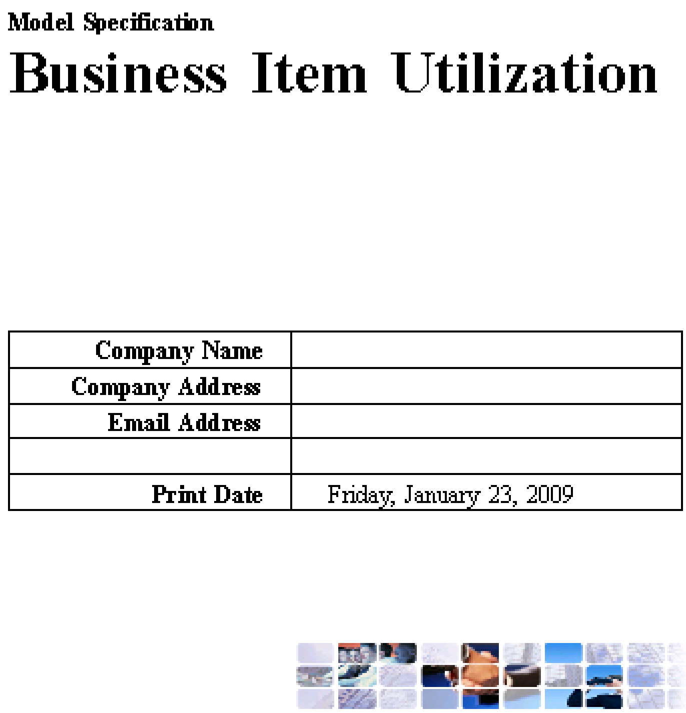
__ 16. Click **OK.**

__ 17. Click **Next** to select **Staff Project.**

__ 18. Click **Next** to skip the parameter fields.

This will take a few moments.

The **Business item utilization report.pdf** is now created.



Model Specification

Business Item Utilization

Company Name	
Company Address	
Email Address	
Print Date	Friday, January 23, 2009

Note

Your class image does not have PDF reader software installed. You may have to install PDF reader to view the report.

This report contains the following information about business items:

- Business item name
- Description
- Attributes
- Activity that the business item is used by

__ 19. Click **Finish**.

__ 20. Close the `Business item utilization report.pdf` file if it is open.

Part 3: Generating and exporting predefined report in docx format

When you export to Microsoft Word format, a Microsoft Word (.docx) document is created. The Word document is fully compatible with Microsoft Word 2007. If you have Microsoft Excel installed, you will be able to edit any charts that appear in the report. If you do not have Excel installed, the charts will be displayed, but will not be editable.

You will create the Resource specification report which shows the information contained in a resource specification.

__ 1. From the Project Tree, expand **Predefined elements (WebSphere Business Modeler) > Reports > Documentation > Resource**. Right-click **Resource specification** and select **Report**.

__ 2. Select **Preview and save.**

__ 3. Select **Microsoft Word(.doc)** for save format.

__ 4. Enter **Resource specification** as Report name.

__ 5. Click **Browse** to select **My Document** as Folder.

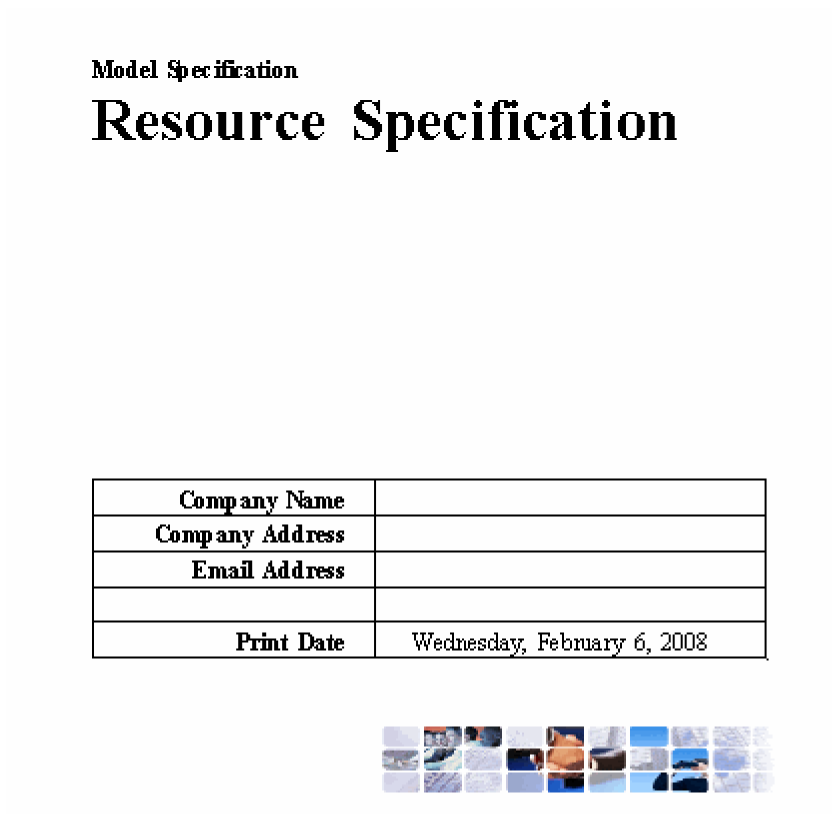
__ 6. Click **OK.**

__ 7. Click **Next** to select **Staff Project.**

__ 8. Click **Next** to skip the parameter fields.

This will take a few moments.

The **Resource specification report.docx** is now created.



Model Specification

Resource Specification

Company Name	
Company Address	
Email Address	
Print Date	Wednesday, February 6, 2008

Note

Your class image does not have Microsoft Word installed. You may have to install Microsoft Office and MS Word in order to view or edit the report.

__ 9. This report includes the following information about the resource or multiple resources in a resource catalog that you select for inclusion in the report:

- Resource name
- Catalog
- Resource definition
- Description
- Costs

__ 10. Click **Finish** to close the preview dialog.

__ 11. Close the **`Resource specification report.docx`** file if it is open.

Part 4: Running a predefined query

Queries allow you to extract and view information on elements of your models.

Queries return information about model elements of one specified type. You can use queries to confirm that the content of your models accurately represents your business, to gather required information for making business decisions, to document and disseminate specific types of information, and to define the content that you can use for creating reports.

The query builder allows you to create queries. Within a query that you create, you can use expressions to get information on the specific model elements that interest you. For example, you can create a query that retrieves all the individual resources that have a cost per time unit of $20.00 or less. For each resource, you can define what type of information the query should display, such as the name, the cost per time unit, and roles for which the resource is qualified.

You can use the predefined queries to extract and view information on elements of your models.

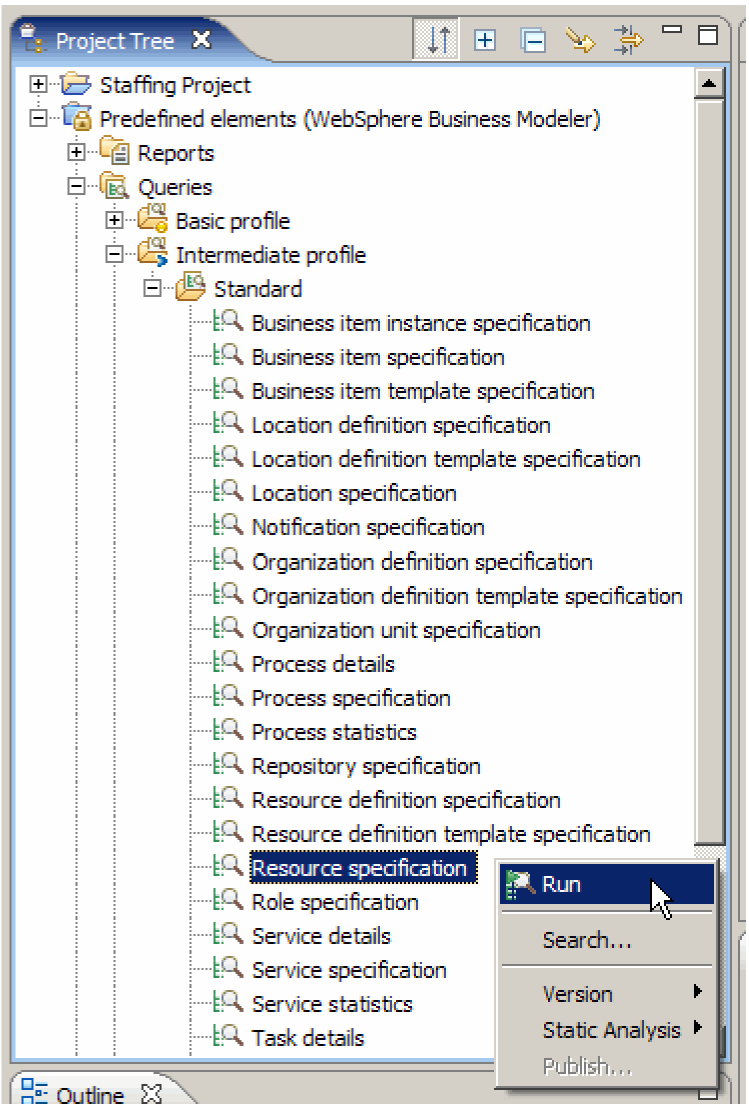
Queries return information about model elements of one specified type. There are three main categories of predefined queries:

- *Details queries* return the elements of other types, such as resources, roles, organization units, locations, and business items, that are associated with the selected element. You can use these queries to validate and to view the relationships between model elements.

- *Statistics queries* return the number of each element associated to the selected model element. You can use these queries to evaluate the complexity and the degree of interconnection of model elements.
- *Specification queries* return the values contained in the specification of the selected element. You can use these queries to validate and to view model elements of specific types.

When you execute a query, the results appear in the Query view. You can also use queries as a source of data when you generate reports.

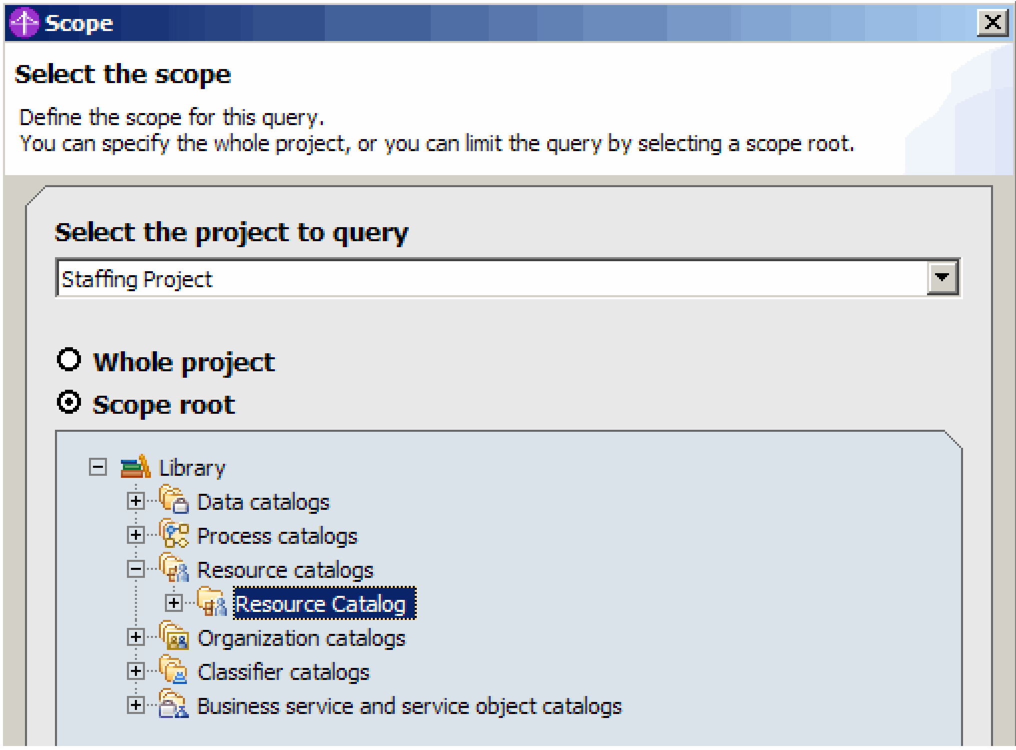
__ 1. Within the Project Tree, select **Predefined elements(WebSphere Business Modeler)> Queries > Intermediate Profile > Standard > Resources Specification**. Right-click and select **Run**.



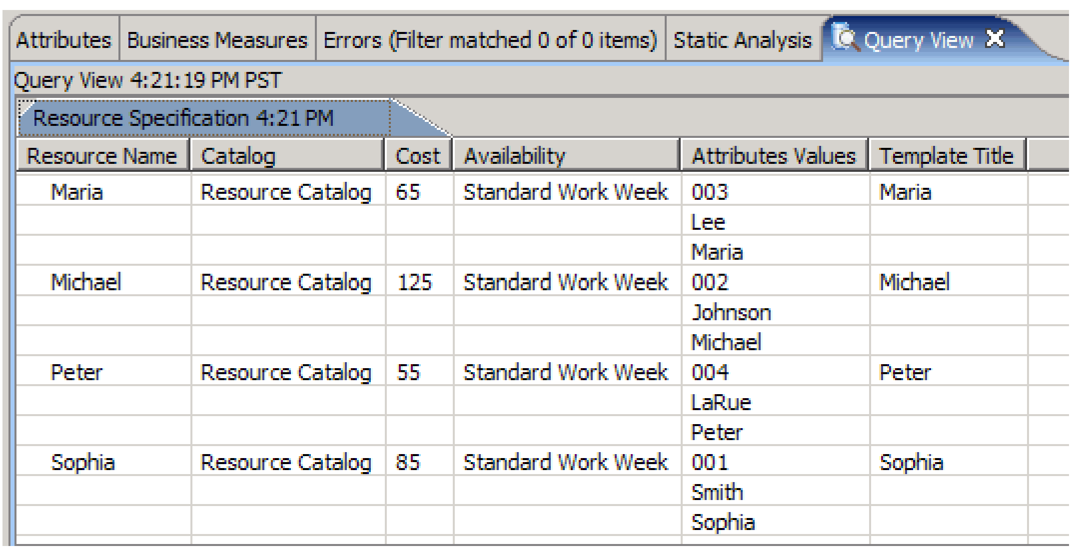
The **Scope** window is displayed.

__ 2. Select **Scope root** and expand **Library**.

__ 3. Select **Resource Catalogs** and click **OK**.

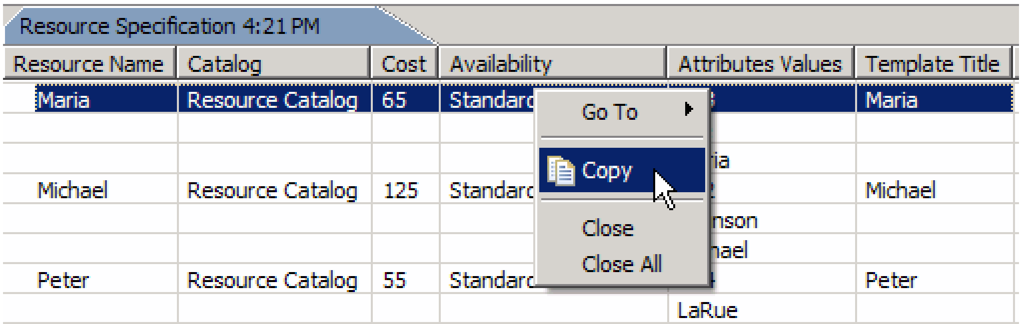


It will take a few moments for the **Resource Specification** results to be displayed in the **Query View** in the bottom right pane. This shows the details of all the business items contained within the Data Catalog.



Resource Name	Catalog	Cost	Availability	Attributes Values	Template Title
Maria	Resource Catalog	65	Standard Work Week	003	Maria
				Lee	
				Maria	
Michael	Resource Catalog	125	Standard Work Week	002	Michael
				Johnson	
				Michael	
Peter	Resource Catalog	55	Standard Work Week	004	Peter
				LaRue	
				Peter	
Sophia	Resource Catalog	85	Standard Work Week	001	Sophia
				Smith	
				Sophia	

__ 4. Right-click the result table and select **Copy**.



You may copy the results to either a Word document, PowerPoint, or spreadsheet.

Part 5: Printing the process diagram

You can print process diagrams, structure diagrams, structure definition diagrams, and simulation profile diagrams. You can also export diagrams, including business measures diagrams, to SVG, JPG and PDF formats. A printed diagram will be a precise copy of the diagram that appears in the diagram's editor.

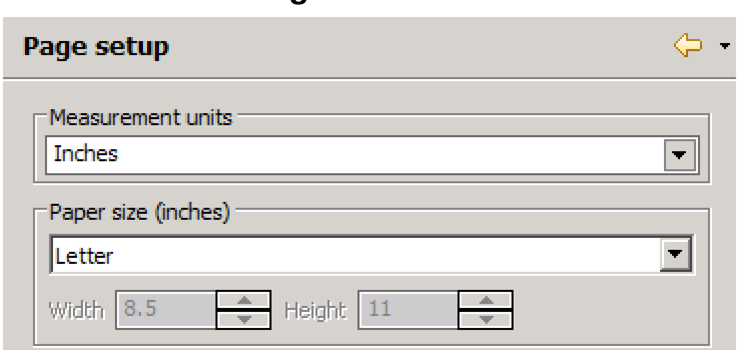
Before you print or export a diagram, ensure that the final product will be useful by ensuring that the diagram is readable in its editor and that the diagram elements do not overlap. Also check that WebSphere Business Modeler is in the correct mode to display the diagram information that you want to print or export. For example, if you want to see inputs and outputs in the process diagram, make sure that you are working in the Advanced Business Modeling mode.

Before you print, you may want to set up your printing preference:

__ 1. From the menu bar of WebSphere Business Modeler, select **Window > Preferences**.

__ 2. Go to **Business Modeling > Page Setup,** and select **Inches** for **Measurement units.**

__ 3. Select **Letter** for **Page size.**

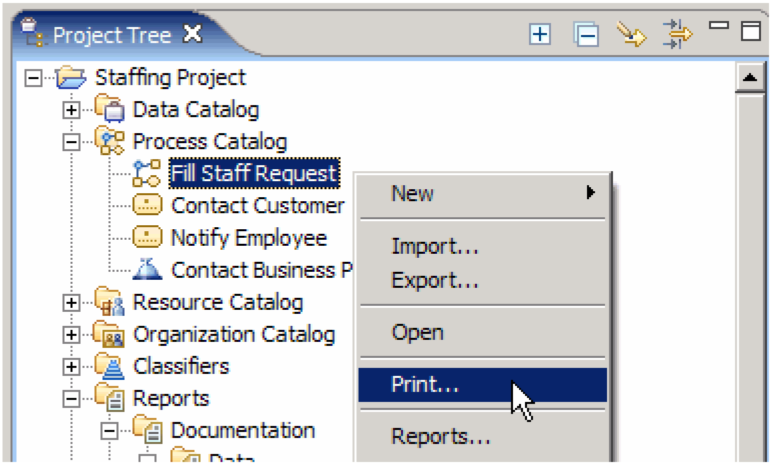


__ 4. Click **Apply**.

__ 5. Click **OK**.

Now, you will print the Fill Staff Request process diagram in swimlane layout from the Project Tree.

__ 6. Within the Project Tree, select **Staffing Project** > **Process Catalog** > **Fill Staff Request**. Right-click and select **Print**.



The **Print** window is displayed.

__ 7. Select **Free-form layout**.

__ 8. Click **Next**.

__ 9. Select **Fit to page**.

__ 10. Click **Next** to preview the diagram.

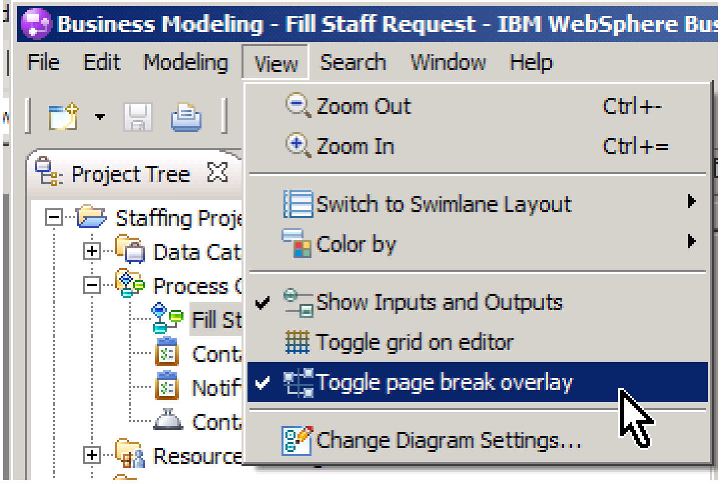
__ 11. Click **Cancel**.

Your class image does not connect to a printer, so you will click **Cancel** the print; otherwise, you can click **Finish**.

Now, you will print the Fill Staff Request process diagram in free-form layout from the process editor.

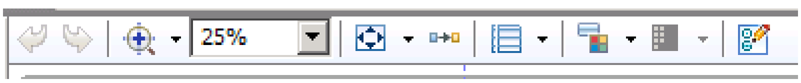
__ 12. If the Fill Staff Request process editor is not open, select **Staffing Project** > **Process Catalog** > **Fill Staff Request**. Right-click and select **Open**.

__ 13. You can preview the page break by selecting **View > Toggle page break overlay** from the menu bar.



Now you can see the page break represented by dotted lines on the diagram.

__ 14. Select Zoom to 25% from the toolbar.



__ 15. Now you can see the whole diagram with page break, and it appears that there are three pages.

Now the diagram will be printed as three pages across and it is much easier to read.

A Preview Dialog will display before you send the print out to printer. You can select **File > Print** to print the diagram.

__ 16. Close the preview dialog.

__ 17. Save changes (Ctrl+S).

Part 6: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. Which report does it show the names of elements contained in a service?

____

__ 2. Which report does it display the quantities of elements contained in a data catalog?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 11.Solution modeling

Estimated time

03:00

What this exercise is about

This exercise covers a case study and interactive group discussion of the modeling techniques and an alternate solution.

What you should be able to do

At the end of the exercise, you should be able to:

- Translate information given in interviews into a meaningful model.

Introduction

In this exercise, you are presented with a case study. You are a business analyst assigned to a business process management project. You will read the case and the information about the company and its expenses reporting process. Based on the information provided, use WebSphere Business Modeler to create a project, business items, and the process diagram representing what was said in the interviews.

Instructor exercise overview

__ 1. Allow 15 – 20 minutes for students to read the case study.

__ 2. Depending on the size of your class, it is best to have students team up to do this lab exercise. The ideal size would be two students to form one team to work together.

__ 3. Before modeling, allow another 15 – 20 minutes for students to ask questions about the case; however, do not discuss how-to questions (that is, how to draw the model or the best way to define elements, and so on). You should lead their questions about the case.

__ 4. Allow 60 – 90 minutes for students to complete their modeling and static analysis.

__ 5. After students have completed the analysis, an interactive group discussion will be led by the instructor.

__ 6. The instructor should also show the class the three possible models that were built. They are located in the checkpoint folder.

__ 7. There is no right or wrong answer and students should build their model as they see the business process. However, the three possible models provided were constructed differently and they can yield different results.

Upon the completion of the process diagram, an interactive group discussion among the students will be held to share with the class about the construction process. The following questions can be discussed during the group discussion:

- Do the SME interviews provide enough information or data for you to build the process model?
- What kind of challenges do you face during the construction of the business model?
- What kinds of information are missing from the interview?
- Are the goals clearly communicated to the analyst?
- How do you determine the level of detail on your process model?
- How do you define the business items based on interviews with SMEs?
- How do you determine the decision points?
- Were you able to identify which tasks are manual or automated?
- Were you able to reduce the model complexity by consolidation or expansion?

In the checkpoint files are three alternate models based on the case study. The instructor should show all three models during the interactive discussion.

Exercise instructions

Part 1: Opening the workspace

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab11_workspace`

Part 2: Case study: Big Apple software

The business case: expense reporting

Company information

Software Services Company: “Big Apple”

- 600 employees, $180 million in revenue
- The company expects to grow 100% in sales and 80% in resources over a three-year period.
- Staff and systems appear to be at maximum capacity
- Customer is willing to invest to improve systems

Current state

- 400 consultants, billed 40 weeks a year.
- 16,000 expense reports (1333 per month or 333 per week).
- 65% of expense reports are not filled out correctly and thus require additional time and effort.

The results of subject matter expert (SME) interviews: what they said:

Services (consultant)

- “Each week, I collect receipts and fill out an expense form, which takes me about 20 minutes.”
- “I submit it to Administration for approval. I have to correct two of the three forms I complete. They just cannot understand what I fill out.”

Administration (clerk)

- “There are six of us and one supervisor working in Administration. We get about 330 expenses per week. Luckily, the same number come in each day.”
- “It usually takes us about 30 minutes to review each expense form if the expenses are filled out correctly. Otherwise, the form goes back to the consultant to be corrected and we have to review it again.”
- “We process about 330 expenses per week, plus 220 (rework), and that is about a total of 550 expenses.”

Accounts payable (supervisor)

- “My three clerks can do the preparation step in about two minutes. It usually takes me about ten minutes to authorize payment in the form of a payment

voucher. After that, it takes the clerks about five minutes to file the expense form and receipts.”

- “After the payment is authorized, we send it out to a payroll company. It takes them two days to cut a check.”
- “I wish I did not have to authorize each expense; it really wastes my time on the small stuff.”

Pain points: conclusion from interviews:

- Too much paperwork
- Payments are made late
- Staff is overworked
- Submitted reports have errors
- Need communication between consulting and administration

Salary information

- Services (consultant): $45 per hour
- Administration (clerk): $10 per hour
- Accounts payable (supervisor): $20 per hour
- Accounts payable (clerk): $10 per hour

Work schedule

- Services (consultant): 8 a.m. – 5 p.m., Mon. – Fri.
- Administration (clerk): 9 a.m. – 6 p.m., Mon. – Fri.
- Accounts payable (supervisor): 9 a.m. – 6 p.m., Mon. – Fri.
- Accounts payable (clerk): 9 a.m. – 6 p.m., Mon. – Fri.

Project standards, process objects, and attributes

Scope

- Processes: expense submission, expense authorization
- Organization units: consulting, administration, accounts payable

Process-modeling reference material

- Interviews with subject matter experts (SME)
- Salary information
- Work schedule

Process data to collect

- Tasks
- Durations

- Cost
- Inputs and outputs
- Decisions and choices
- External processes

Organizational data to collect

- Organizational units
- Resources
- Roles

Project goals

Current goals:

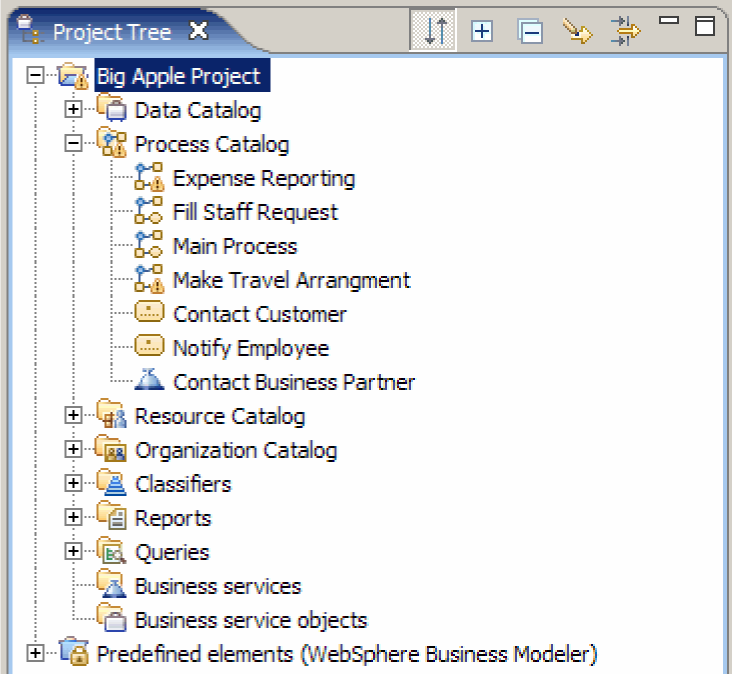
- Understand the current expenses reporting process
- Build the expenses reporting model
- Identify the current process time and cost

Future goals

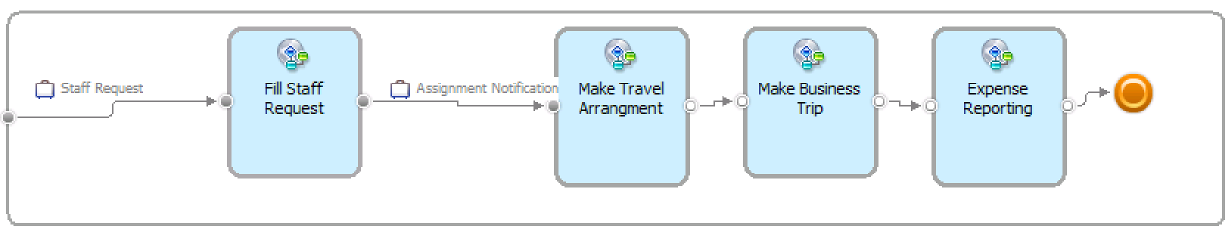
- Reduce workload on accounts payable staff by 50%
- Streamline the approval process
- Improve data integrity
- Reduce rework

Part 3: Opening the main process

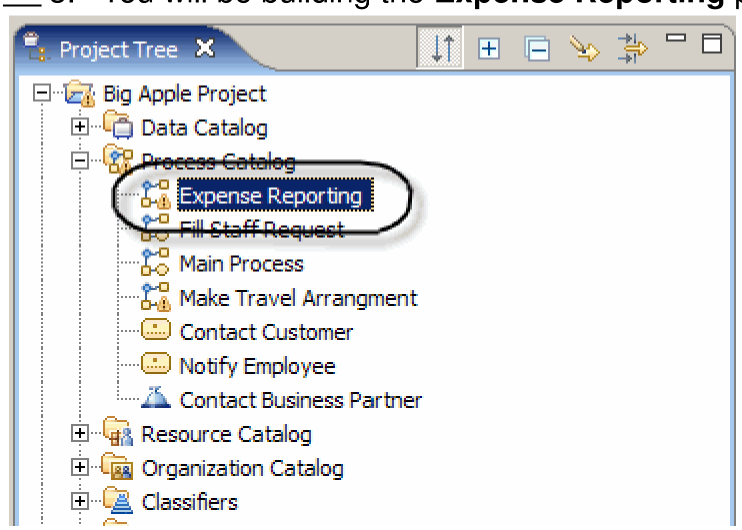
__ 1. In the Big Apple Project, there are four different processes.



__ 2. The **main process** has been created for you.



__ 3. You will be building the **Expense Reporting** process in this lab.



Now you can begin modeling

Based on all the information available in the case, you may now start building the **Expense Reporting** process model to represent the **current process**.

When you complete your model

Upon completion of your process model, you will participate in an interactive group discussion to be led by the instructor.

Solutions:

As there is no right or wrong solution. There is a solution completed for the case study; it is located in the Student Files folder.

Some of the key points:

Use bulk resources to avoid creating actual individual resources.

Make use of joins to show the sequence of events

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 12.Collaboration support for version control

Estimated time

01:00

What this exercise is about

This exercise covers collaboration support for version control.

What you should be able to do

At the end of the exercise, you should be able to:

- Enable version control on projects
- Check out a project
- Synchronize project data
- Commit and update local data to the repository
- View and compare versions

Requirements

The following products are required for this lab:

- IBM Rational ClearCase LT V7.0.1
- IBM Rational License Key

Exercise instructions

Part 1: Adding a Rational ClearCase repository

In this exercise, you will add a Rational ClearCase repository location to the Repository view in WebSphere Business Modeler. A Rational ClearCase VOB (versioned object base) has already been created for you on this lab exercise.

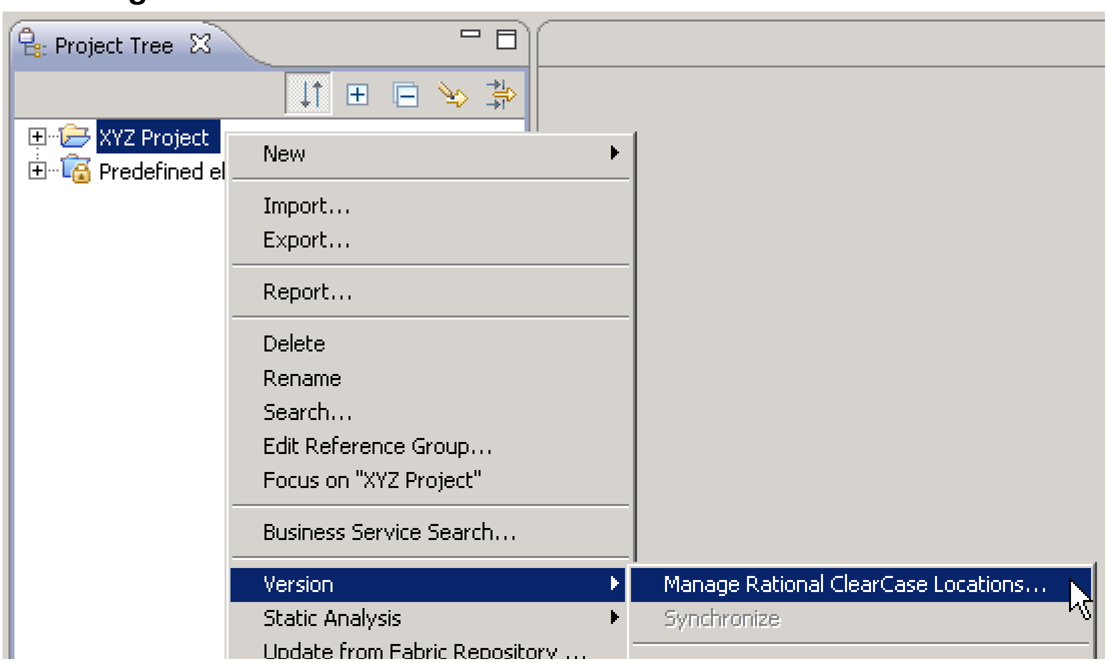
To add a connection to a Rational ClearCase VOB, complete the following steps:

__ 1. Launch WebSphere Business Modeler.

__ 2. Enter workspace: `C:/workspaces/Lab12_User1_workspace`

__ 3. Make sure all the processes in the Project Tree are closed and no processes are open in the process editor.

__ 4. Select **XYZ Project** from the Project Tree, and right-click to select **Version > Manage Rational ClearCase Locations**.



The **Manage Rational ClearCase Location** wizard opens.

__ 5. Select **Add a new location** and click **Next**.

__ 6. Click the **Browse** button to locate the following information:

VOB location: `C:\cc_stgloc\views\administrator_view\Lab_VOB`

Note: If you type the path and location, it is case sensitive.

__ 7. Click **OK** to select the folder.

__ 8. Click **Finish**.

You can now share projects and get projects stored in the Rational ClearCase VOB repository.

Part 2: Sharing projects

You can share any business modeling project with other team members by adding it to a Rational ClearCase VOB repository location.

To share a project, complete the following steps:

__ 1. In the Project Tree, right-click the **XYZ project** and select **Version > Share**.

The **Share Project** wizard opens.

__ 2. In the **Providers** field, select **ClearCase** as the provider.

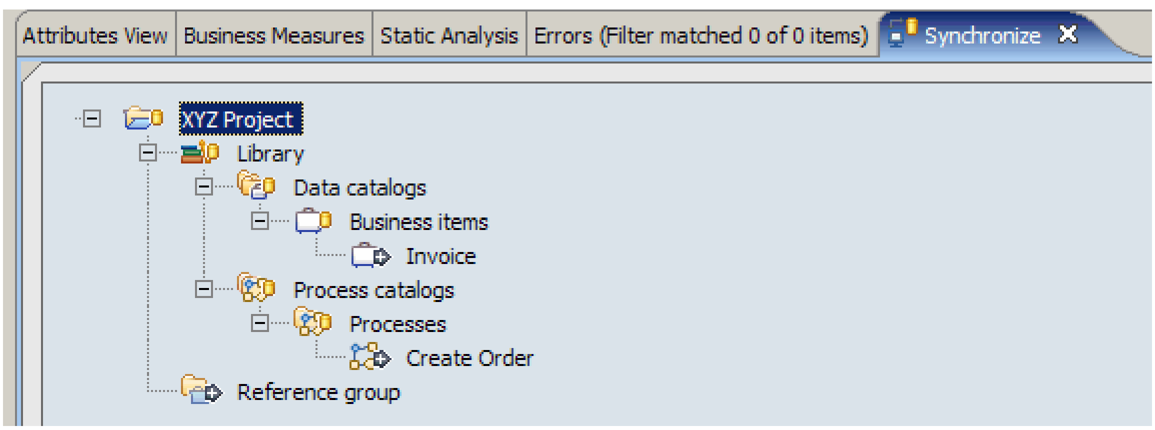
The **Locations** field updates to show the VOB locations.

__ 3. Click **Finish**.

The repository now has a folder for the project. The **Synchronize** view opens, and it displays the project. This will also open a new view in the Business Modeling perspective.

__ 4. In the Synchronize tab, right-click and select **Expand All** to expand the **XYZ Project** completely.

This view will list every component in your project that has been added or modified since it was last committed.



You do not have to perform this synchronization step. Instead, you can directly commit the project to the ClearCase repository since it is a new project. When working with existing projects from a ClearCase repository, you should use the Synchronize command as a final check of what you are putting into the repository.

Note: Synchronization state applies to both CVS and ClearCase.

The synchronize view shows the synchronization state of resources in your workspace compared to those in the repository. This state is shown by using icons

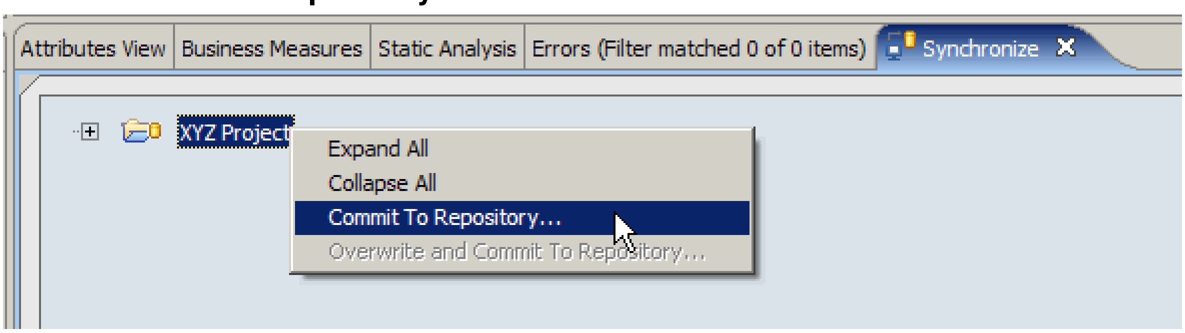
and can also be configured to show the state as text appended to the resource name. A description of the icons is shown in the table below:

	An incoming addition means that a resource has been added to the repository. **Updating** will transfer the resource to your workspace.
	An incoming change means that the file has changed in the repository. **Updating** will transfer the new file revision to your workspace.
	An incoming deletion means that a resource was deleted from the server. **Updating** will delete your local resource.
	An outgoing addition means that the file was added to your workspace and is not yet in the repository. **Adding** then **Committing** will transfer the new file to the repository.
	An outgoing change means that the file was change locally. **Committing** the file will transfer the changes to the repository and create a new revision of the file.
	An outgoing deletion is a resource that has been deleted locally. **Committing** these resources will cause the remote resource to be deleted. **Note**: in CVS directories are never really deleted from the repository. Instead, files are deleted and empty directories are pruned from your workspace.
	A conflicting additions means that the resource has been added locally and remotely.
	A conflicting change means that the file has been changed locally and remotely. A manual or automatic merge will be required by the user. Also, any entries in the view that contain children that are conflicts will also be decorated with the comflict icon. This is done to make conflicts easy to find.
	A conflicting deletion means that the resource was deleted locally and remotely.

Part 3: Committing to repository

Now you have established the connection with the ClearCase repository by **Sharing**. To send a project into the repository initially, complete the following steps:

__ 1. In order to send the components of your project to the ClearCase repository, you must commit them. From the **Synchronize** view, right-click the project and select **Commit To Repository**.



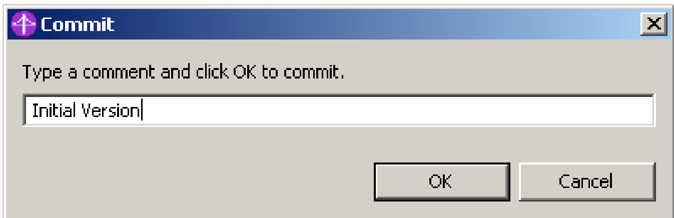
The **Commit To Repository** option is displayed when your local workspace contains the initial or most recent version of the element.

You can also commit individual resources instead of sending the entire project. Since this is the first time the project is being committed, you should send the entire project. Later, you have the option to commit only the components you changed.

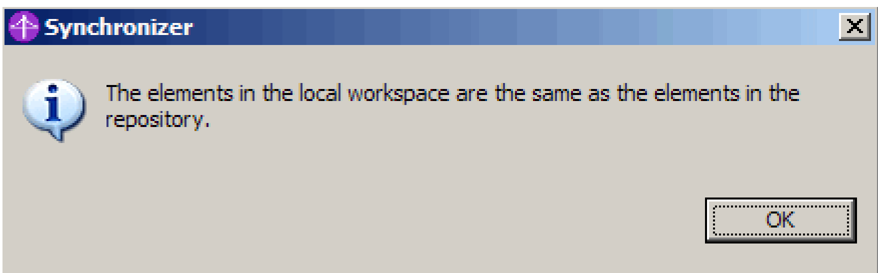
Note

Simulation profiles and snapshots cannot be committed to the version control repository.

__ 2. Executing the Commit command opens a dialog which prompts you for a comment. Enter **`Initial Version`** as comment and click **OK**.



The tool will connect to the repository and transfer all the components of the project to the ClearCase repository. This process can take up to a few minutes to complete. Assuming there are no conflicts or errors, you have successfully created your first version.

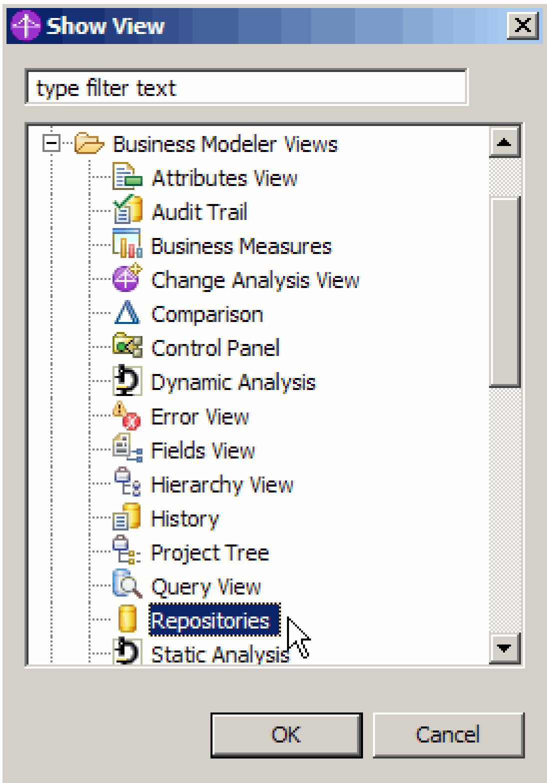


__ 3. Click **OK**.

__ 4. To verify the commit to repository, from the main menu bar, select **Window > Show View > Other**.

The **Show View** window appears.

__ 5. In the navigation tree, expand **Business Modeler views** and select **Repositories**.

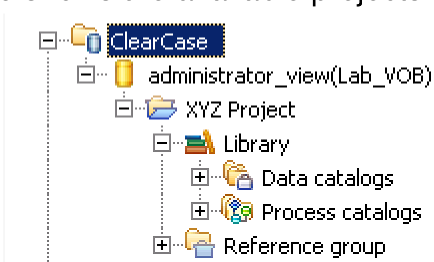


__ 6. Click **OK**.

The **Repositories** pane is displayed.

__ 7. In the **Repositories** pane, expand the version control system node (ClearCase) and then expand the repository node.

The tree shows the available projects in the repository.



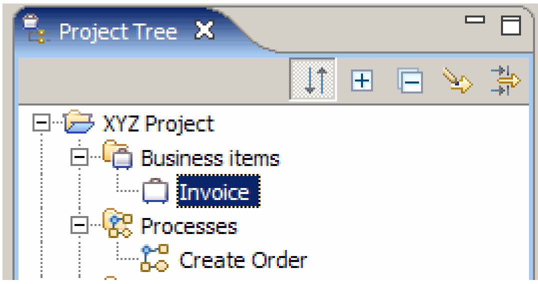
Note: The tree in the **Repository** view may have a CVS node and a Rational ClearCase node if you have added one or more repositories in both systems. Similarly, the CVS node and the Rational ClearCase node will have more than one repository if you have more than one location (CVS) or VOB (Rational ClearCase).

Part 4: Making and managing changes in your project

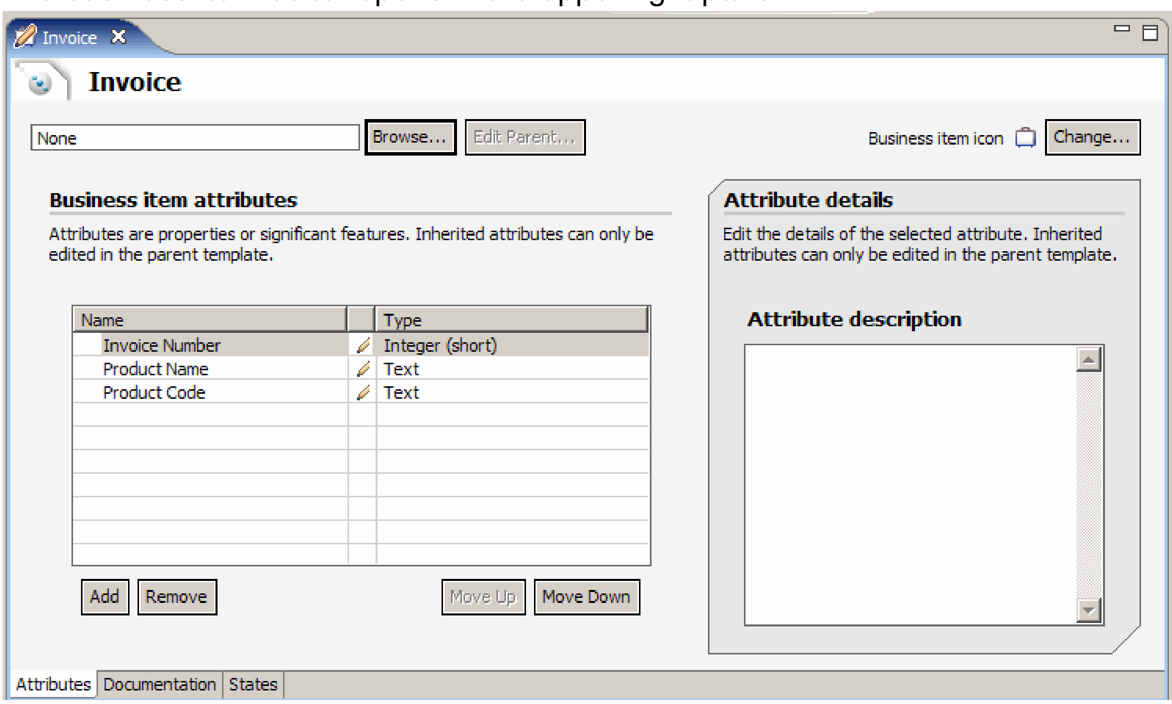
In this section of the lab, you will make modifications to your project, compare revisions, and examine object histories.

__ 1. Add a new attribute called **`Product Description`** to the ABC Product business item:

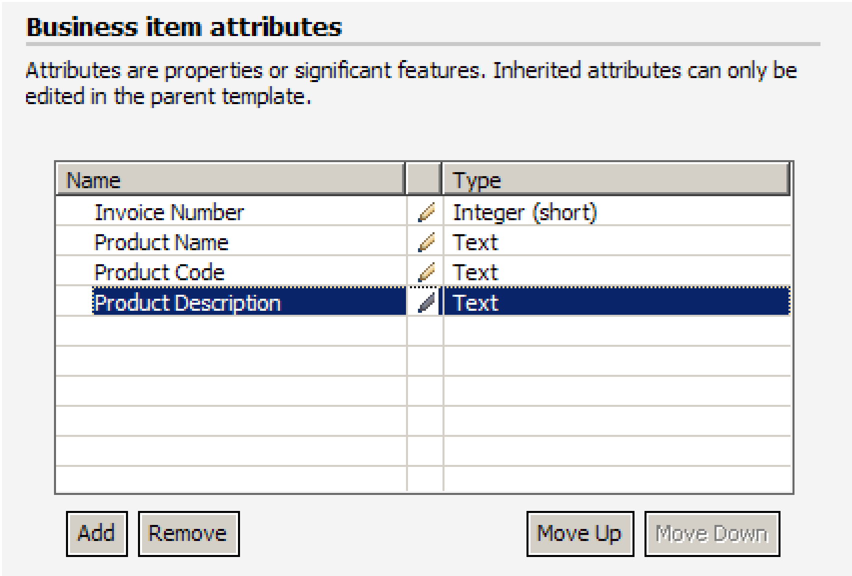
__ a. From the Project Tree, expand **XYZ Project** > **Business items** > **Invoice**, and then double-click **Invoice**.



The business item editor opens in the upper right pane.



__ b. Click **Add** to add a new business item attribute called `Product Description`

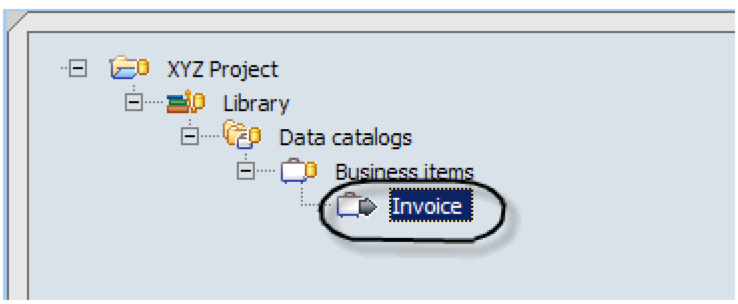


__ c. Save changes (Ctrl+S).

__ d. Close the business item editor.

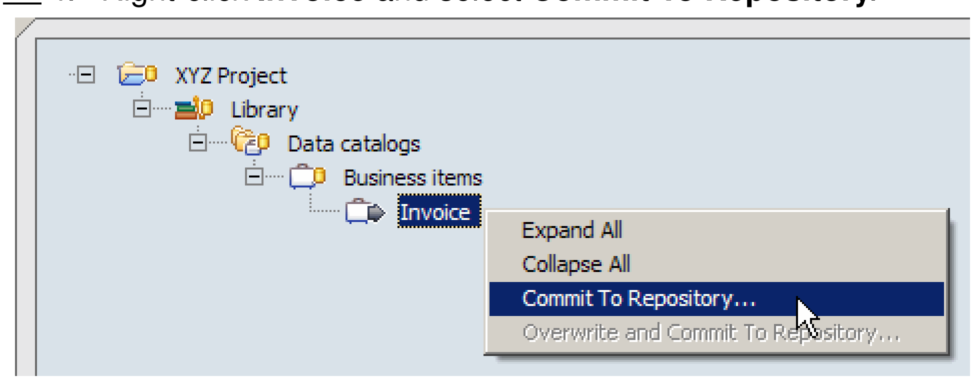
__ 2. In the Project Tree, right-click **Invoice** under **Business items** and select **Version > Synchronize**.

__ 3. Go to the **Synchronize** view and expand the XYZ Project.



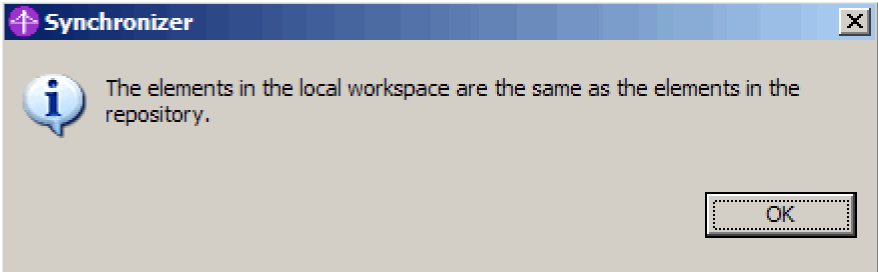
The symbol next to the **Invoice** indicates that there is change to be sent to the repository. The symbol with right arrow means that changes to send to the repository.

__ 4. Right-click **Invoice** and select **Commit To Repository**.



__ 5. Enter **`Added Product Description`** as a comment, and click **OK**.

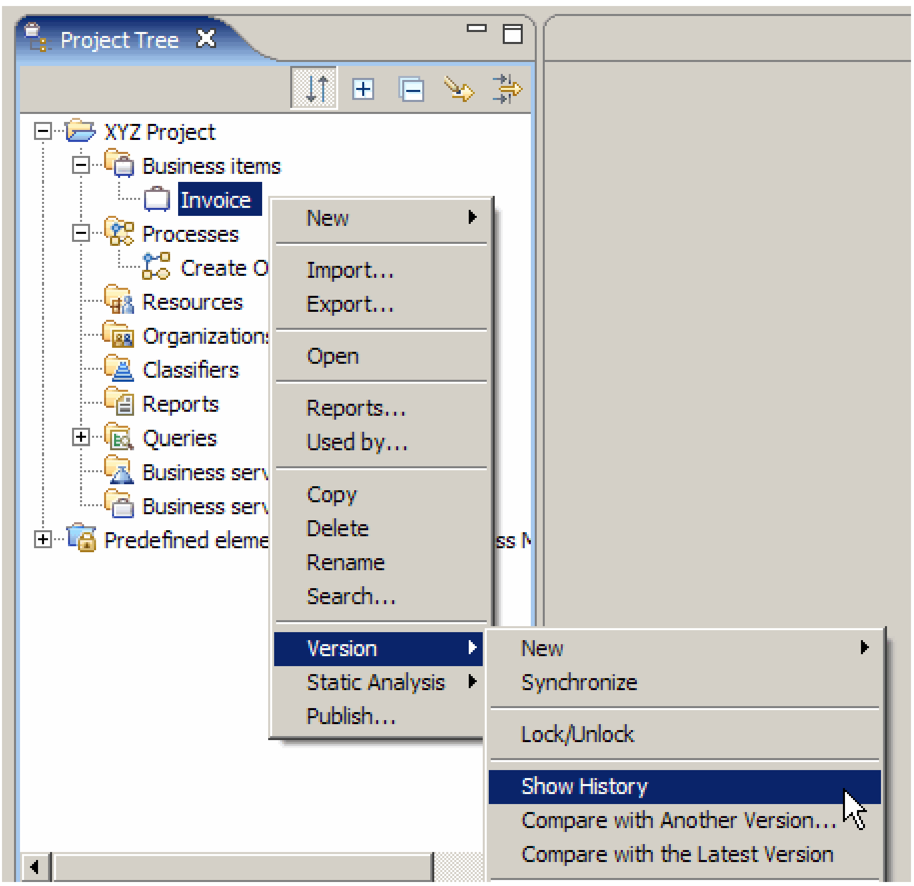
__ 6. Once you have committed to the repository, the confirmation window will display.



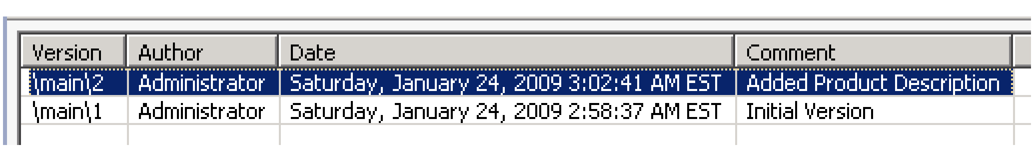
__ 7. Click **OK**.

__ 8. You can view the history of the component:

__ a. In the Project Tree, right-click the business item **Invoice** and select **Version > Show History**.



The **History view** opens and shows you the versions of the component and the comments associated with each version.

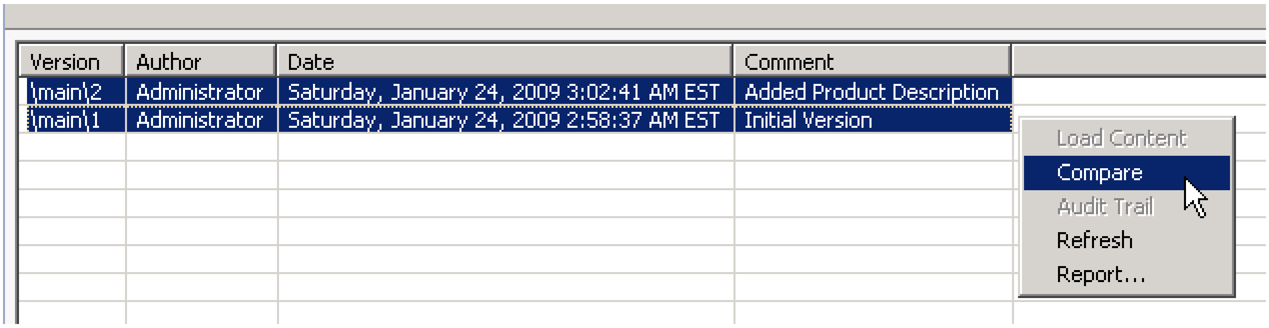


Version	Author	Date	Comment
\main\2	Administrator	Saturday, January 24, 2009 3:02:41 AM EST	Added Product Description
\main\1	Administrator	Saturday, January 24, 2009 2:58:37 AM EST	Initial Version

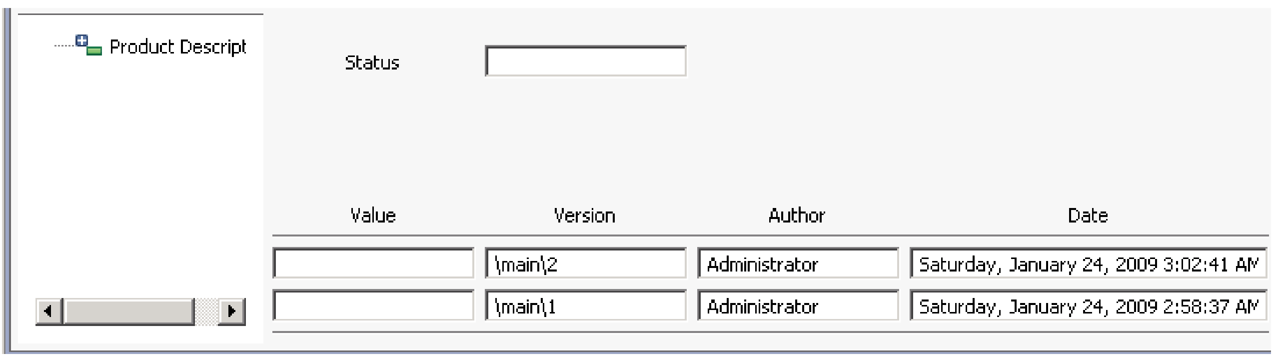
If you want to return to a previous version of a component, make certain that it is not open in any editor, then right-click the older version in the History view and select **Get Content**. The tooling will connect to the repository and retrieve the component. Open the component in an editor to verify that the previous was successfully retrieved.

__ 9. To examine the differences between two versions, select both rows in the **History view** (hold the Shift key while clicking each row).

__ 10. Right-click and select **Compare**.

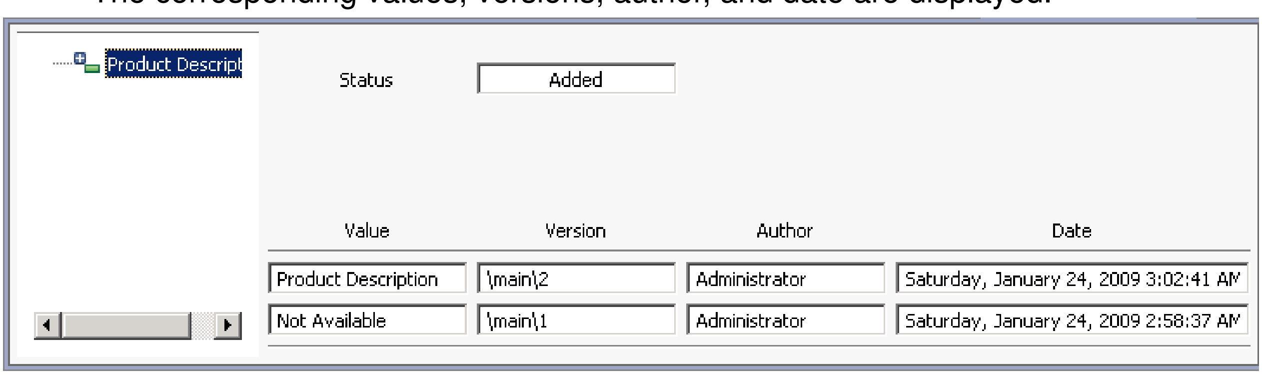


The tool connects to the repository and retrieves information regarding both versions. The **Comparison** view opens.



By default, the **Comparison** view displays any attributes that have changed, when they changed, and who changed them.

__ 11. Click **Product Description** in the **Comparison** view
The corresponding values, versions, author, and date are displayed.



Part 5: Create a new workspace and add new repository location

In this section of the lab, you will retrieve a project from the ClearCase repository that was not previously in your workspace. This is the sort of activity you would perform if you had a new team member on your project, installed WebSphere Business Modeler on a new machine, or otherwise no longer had access to the local project.

You can check out a project from the ClearCase server. This enables you to work with and modify a local copy of the project. Before you can check out a project, you need to add the ClearCase repository location. Note that you can only check out a project if your local machine does not already have a project with the same name. If it does, you must delete or rename the existing project before you can check out the ClearCase project.

In this section of the lab, you will be emulating a second user. The following steps walk you through the creation of a new workspace and adding the ClearCase repository location.

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab12_User2_workspace`

__ 2. Make sure all the processes in the Project Tree are closed and no processes are open in the process editor.

__ 3. From the Project Tree, and right-click to select **Version > Manage Rational ClearCase Locations**.

The **Manage Rational ClearCase Location** wizard opens.

__ 4. Select **Add a new location** and click **Next**.

__ 5. Click the **Browse** button to locate the following information:

VOB location: **`C:\cc_stgloc\views\administrator_view\Lab_VOB`**

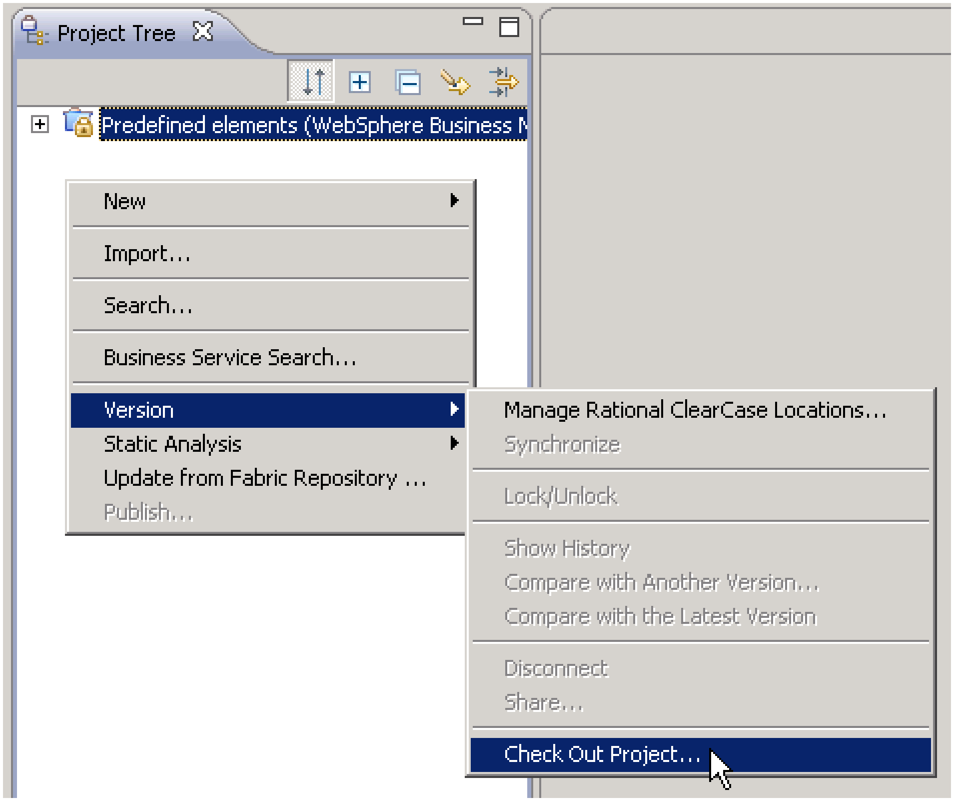
Note: If you type the path and location, it is case sensitive.

__ 6. Click **OK** to select the folder.

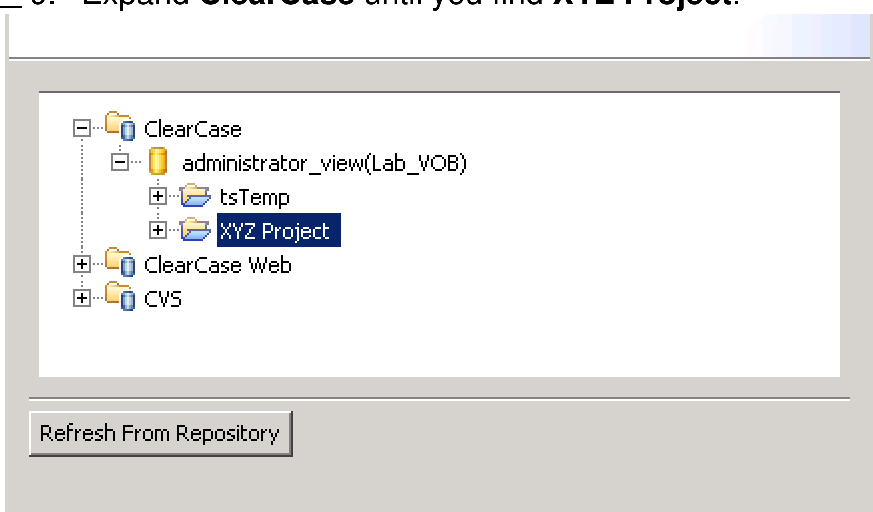
__ 7. Click **Finish**.

You can now check out projects from the Rational ClearCase repository.

__ 8. In the Project Tree, right-click and select **Version > Check Out Project**.

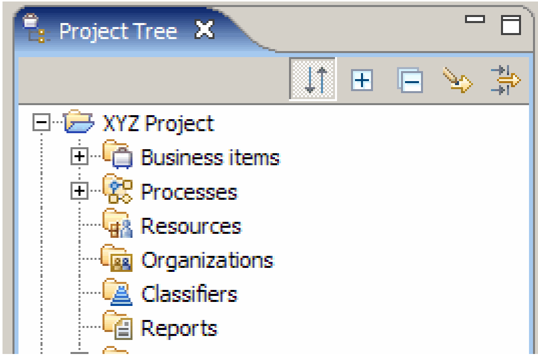


__ 9. Expand **ClearCase** until you find **XYZ Project**.



__ 10. Select **XYZ Project** and click **Finish**.

The XYZ Project is now available in the Project Tree.



__ 11. Add another attribute called `Price` to the Invoice business item:

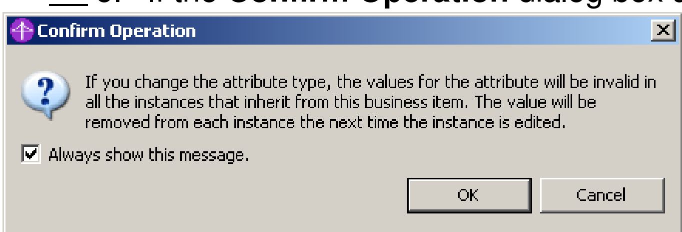
__ a. From the Project Tree, expand **XYZ Project > Business item**s and then double-click **Invoice**.

__ b. Click Add to add a new business item attribute called **Price**.

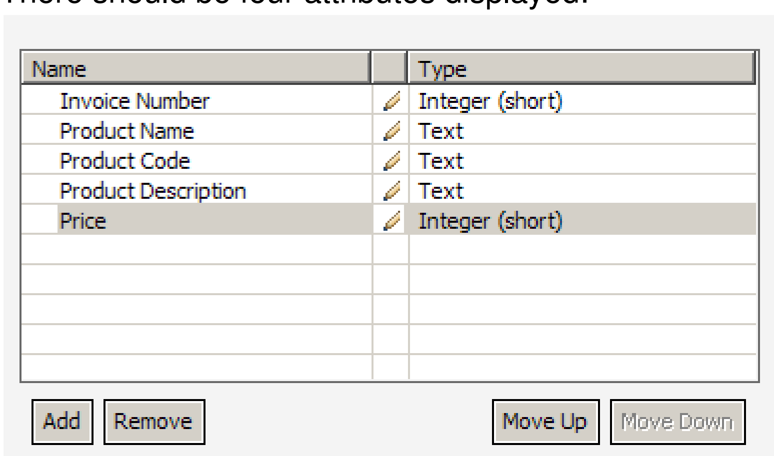
__ c. Change the type to **Integer (short)**.

__ d. Click **OK**.

__ e. If the **Confirm Operation** dialog box appears, click **OK**.



There should be four attributes displayed:



__ 12. Save changes (Ctrl+S).

__ 13. In the Project Tree, right-click **Business items > Invoice** and select **Version > Synchronize**.

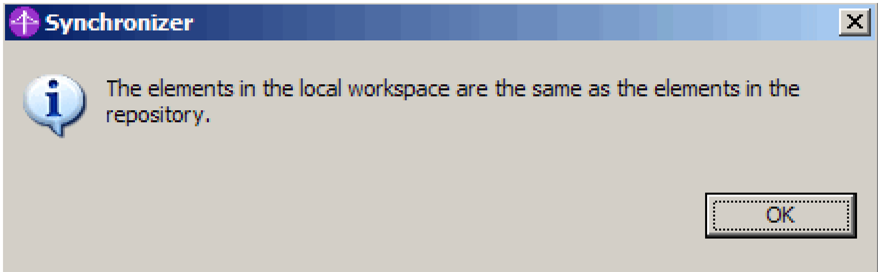
__ 14. Go to the **Synchronize** view**,** expand the XYZ Project.

The symbol next to the **Invoice** indicates that there is change to be sent to the repository.

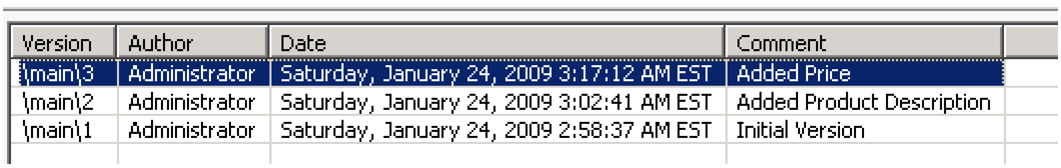
__ 15. Right-click **Invoice** and select **Commit To Repository**.

__ 16. Enter **`Added Price`** as a comment, and click **OK**.

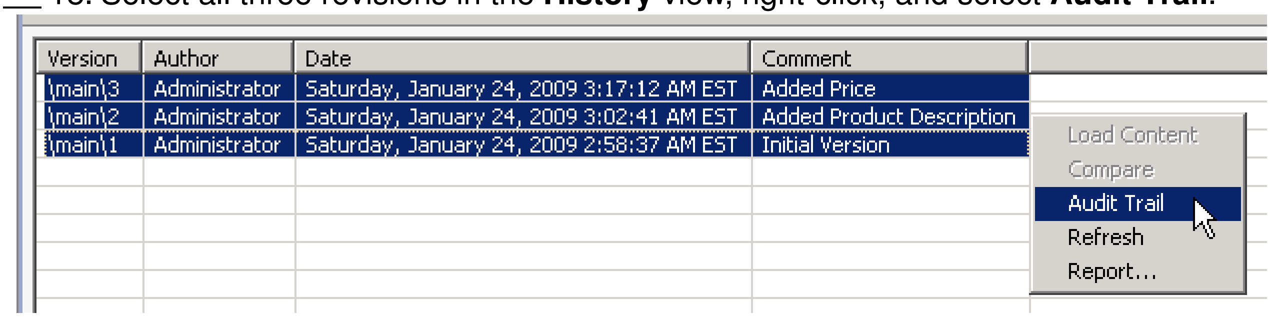
Once you have committed to the repository, the confirmation window will display.



__ 17. Right-click **`Invoice`** from the Project Tree and select **Version > Show History**.

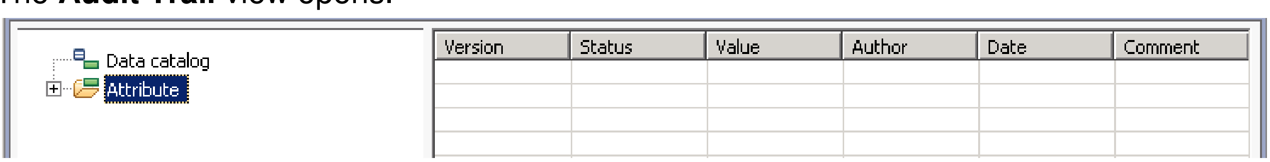


__ 18. Select all three revisions in the **History** view, right-click, and select **Audit Trail**.

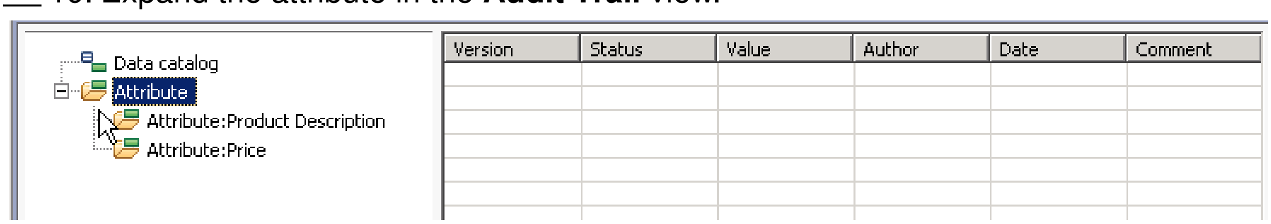


The tool connects to the repository and retrieves information regarding all versions. It will take a few moments.

The **Audit Trail** view opens.

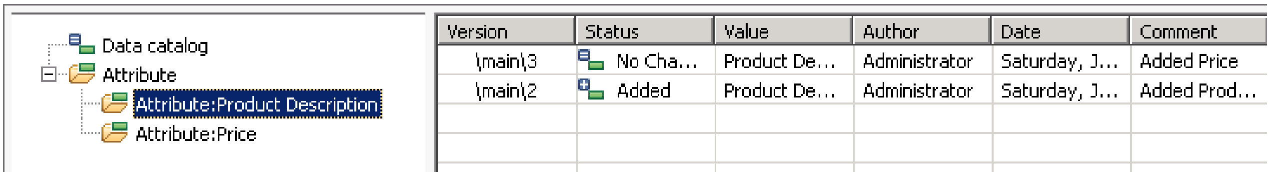


__ 19. Expand the attribute in the **Audit Trail** view.

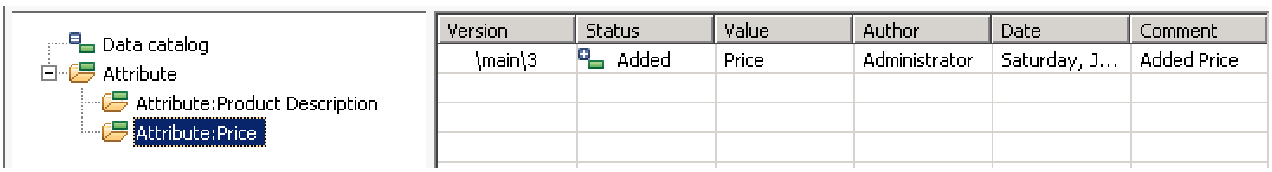


As you select the attributes in the left pane of the view, you will see a listing of information about when changes were made.

If you select the ***Attribute: Product Description***, you will see that the attribute “Product Description” was added in version 2 and there were no changes to the attribute in version 3.



If you select the ***Attribute: Price***, you will see that the price was added in version 3.



For some components, such as tasks in a process, you can also view more details. Perform an audit of a process which has had three or more versions, and then select one of the changed attributes. You will see the **Show Details** command. If you select the show details command, the Comparison view will open and allow you to see the specific values that have changed.

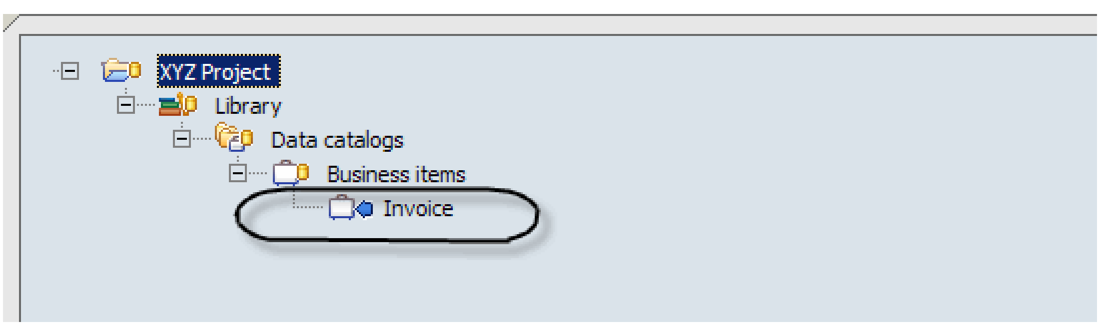
Part 6: Updating a project from the repository

In this section of the lab, you will go back to the workspace of the user1 and synchronize the XYZ Project.

__ 1. Switch to the WebSphere Business Modeler session with **`C:\workspaces\Lab12_User1_workspace`**

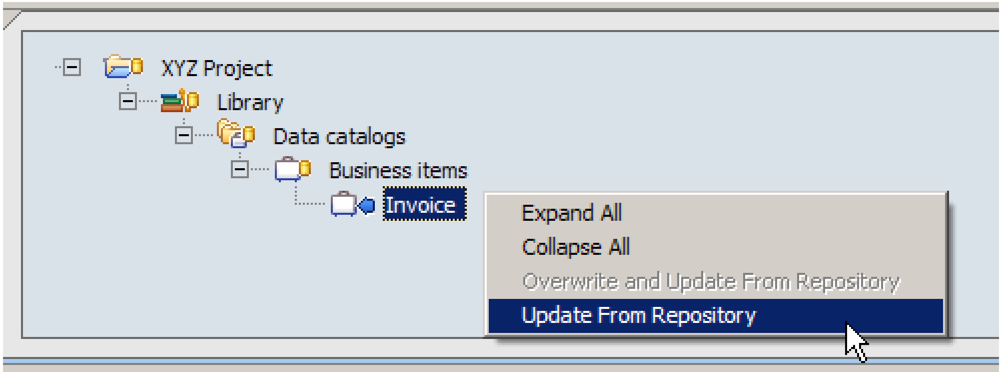
__ 2. In the Project Tree, right-click **XYZ Project** and select **Version > Synchronize**.

__ 3. In the **Synchronize** view, expand the nodes of **XYZ Project** to find the differences between the project in the repository and your local project.



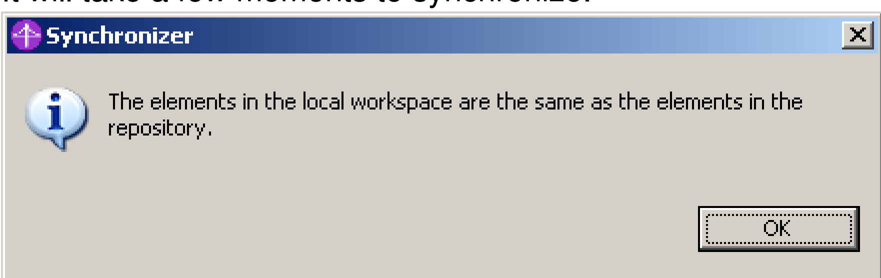
Since the business item, ABC Product, was the only element modified, the Synchronize view lists only this item. The symbol with left arrow, which is different from the one you have seen previously, means that changes to receive from the repository.

__ 4. In the **Synchronize** view, right-click **XYZ Project** and select **Update From Repository**.



__ 5. If you are asked whether to close the editor, click **Yes**.

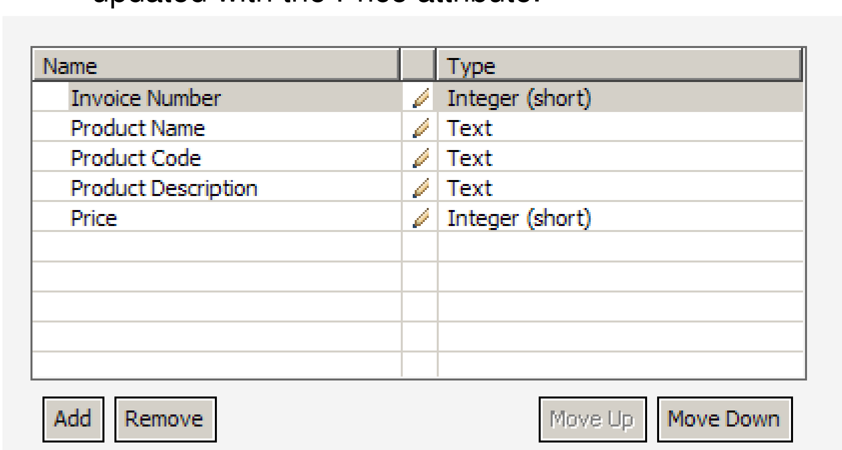
It will take a few moments to synchronize.



__ 6. Click **OK**.

Once the local project has been updated with the changes, the **Synchronize** view no longer displays any elements.

__ 7. In the Project Tree, double-click the business item **Invoice** to verify that it has been updated with the Price attribute.



Now you may explore the project in your local machine, show the history of components, and so on. Note that all of the functions you explored earlier in this lab are available. Once you have retrieved the project, you can also retrieve earlier versions of the components by using the `Get Content` command from the History view.

Note

Working in a multiple-developer environment

When you have multiple developers working on a project, there are additional functions that become relevant. In the screen capture below, you can see what happens if a different person makes changes to the repository. The local workspace is out of sync with the ClearCase repository. The file was changed on the server and exists in the local workspace.

In dealing with situations like this, you have several options:

- Option 1
  You can accept that the server version is correct. Right-click the project and select **Version > Update**. This will retrieve the most current version of all components of the project.
- Option 2
  You can treat each case individually. Right-click the project and select **Version > Synchronize**. Expand the project in the Synchronize view and in each case of a conflict, resolve it either by updating or overwriting and updating it.

Part 7: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. What are the supported functions with Rational ClearCase?

____

__ 2. How do you lock and unlock elements?

____

__ 3. Exit WebSphere Business Modeler.

__ 4. Review the flashcards for this unit.

End of exercise

Exercise 13. Collaboration using WebSphere Business Modeler Publishing Server

Estimated time

00:45

What this exercise is about

This exercise covers the collaboration using WebSphere Business Modeler Publishing Server.

What you should be able to do

At the end of the exercise, you should be able to:

- Review process models and diagrams
- Create and review comments

Requirements

- IBM WebSphere Business Modeler Publishing Server V6.2 is installed.

Instructor exercise overview

This lab exercise walks through the functions and features of WebSphere Business Modeler Publishing Server.

Students will be accessing the Publishing Server running on their own VMware image. The IDs and passwords for the publishing server have already been created in the student's VMware image. There are two user IDs; they are **REVIEWER** and **VIEWER**. Passwords are same as the IDs, and they are **not** case sensitive.

Exercise instructions

The publishing server provides a way for people that do not have WebSphere Business Modeler to view and comment upon business process models. It displays the models in a Web browser using a set of portlets. The portlets generally correspond to the four panes used by WebSphere Business Modeler.

You connect to IBM WebSphere Business Modeler Publishing Server, so you can publish projects. Once you have published a project, other people can use a Web browser to view and comment on the project's elements such as processes, business items, and resources.

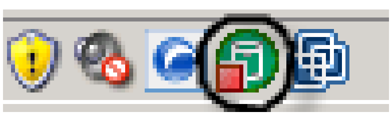
Part 1: Starting WebSphere Application Server

The publishing server part of WebSphere Business Modeler Publishing Server is a Web application that runs within WebSphere Application Server. You will start the server.

__ 1. Make sure IBM DB2 Database is up and running, and you can check the icon on the status bar of the VMware image.

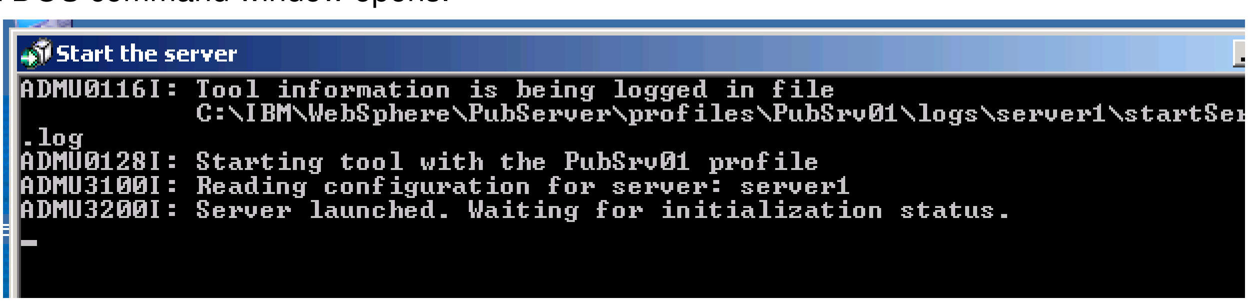
Note

This icon means IBM DB2 in not ready yet..



__ 2. To start WebSphere Application Server, right-click the **Start the server** icon on your desktop of the VMware image, and select **Open**.

A DOS command window opens.



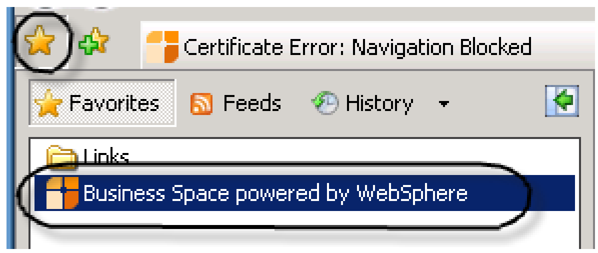
It will take a few moments to start the server. Once it is started, the DOS command window will disappear from the desktop.

Part 2: Launching Business Space

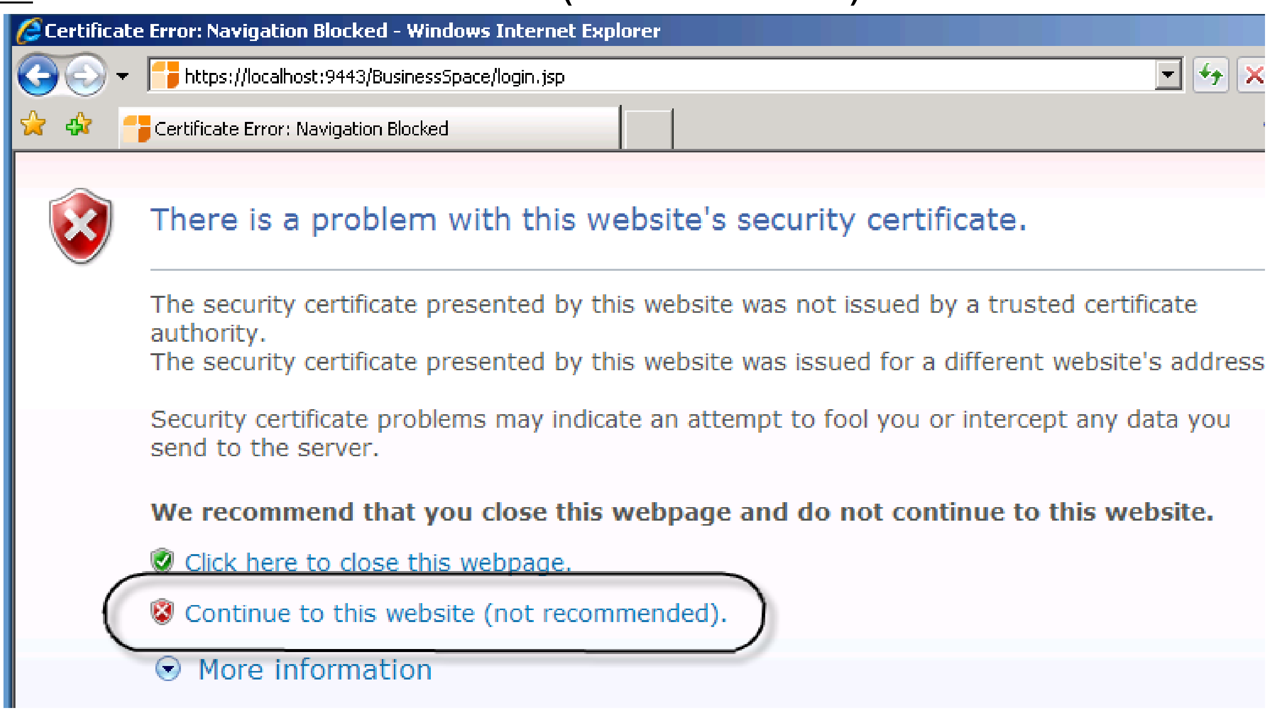
WebSphere Business Modeler Publishing Server uses Business Space powered by WebSphere to display the pages and views that contain projects, project elements, and comments in a Web browser client.

__ 1. To open a Web browser, select **Start > Programs > Internet Explorer**.

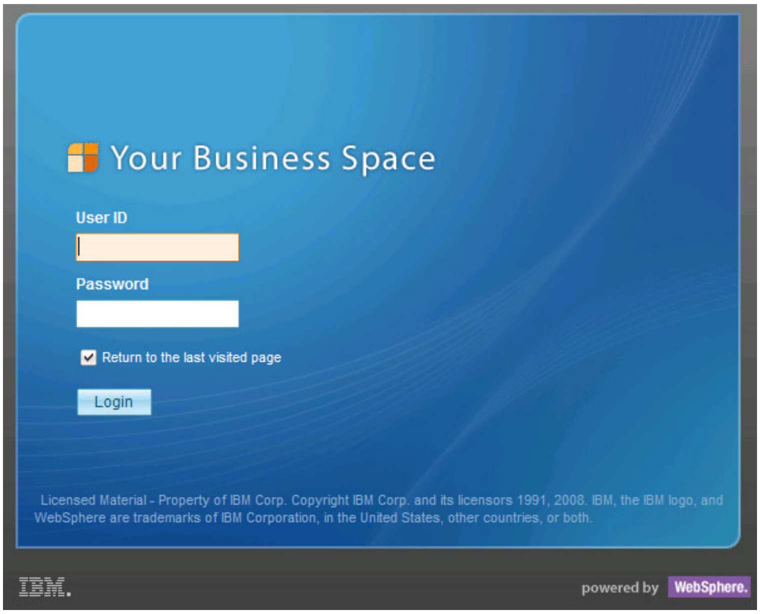
__ 2. Click **Favorites** icon from I**nternet Explorer**, and select **Business Space powered by WebSphere**..



__ 3. Click **Continue to this Web site (not recommended)**:



Business Space login screen displays.



__ 4. A logon screen will display, enter the following User ID and password:

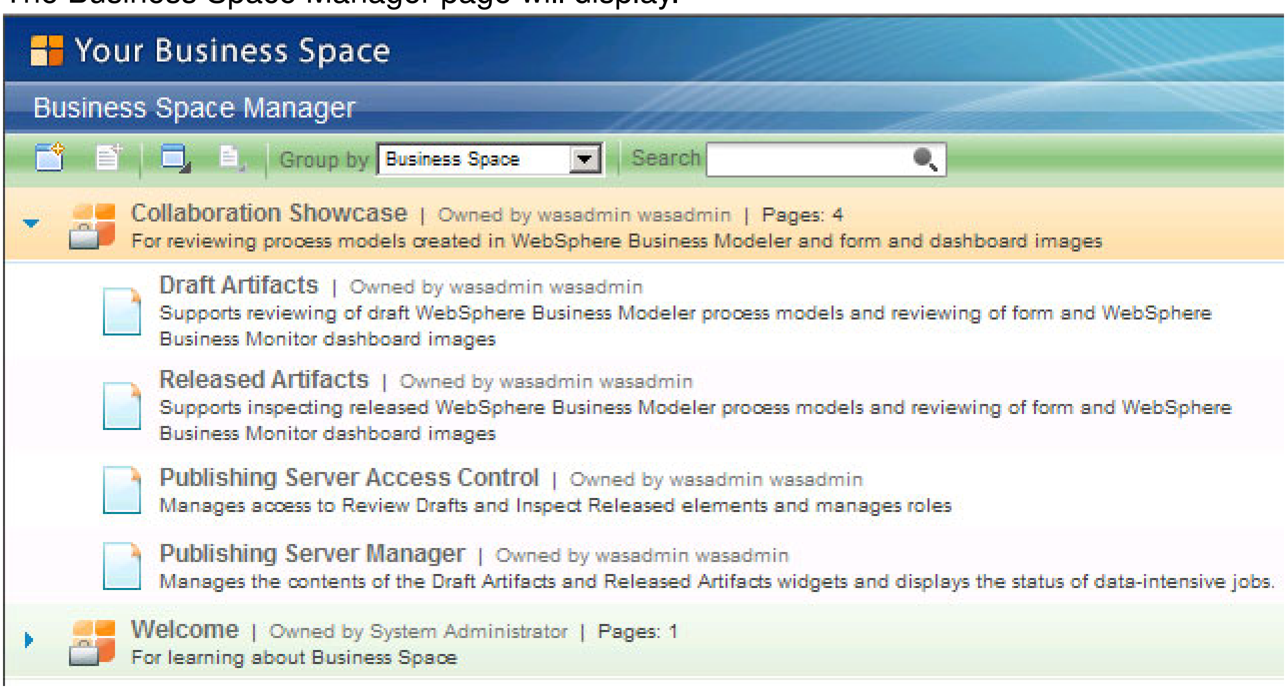
User ID: **`REVIEWER`** (not case sensitive)

Password: **`REVIEWER`** (not case sensitive)

__ 5. Uncheck the **Return to the last visited page** box.

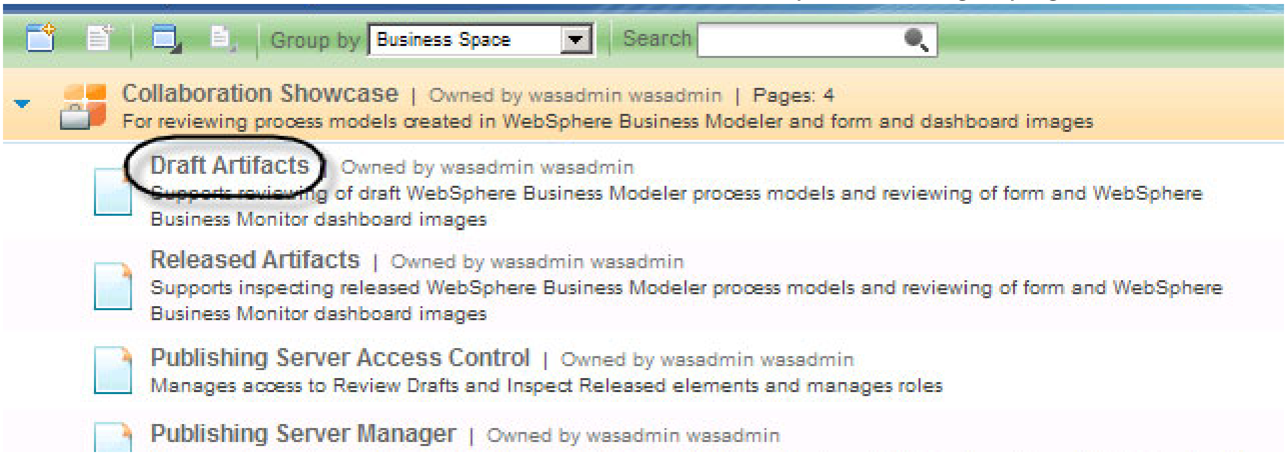
__ 6. Click the **Login** button.

The Business Space Manager page will display.

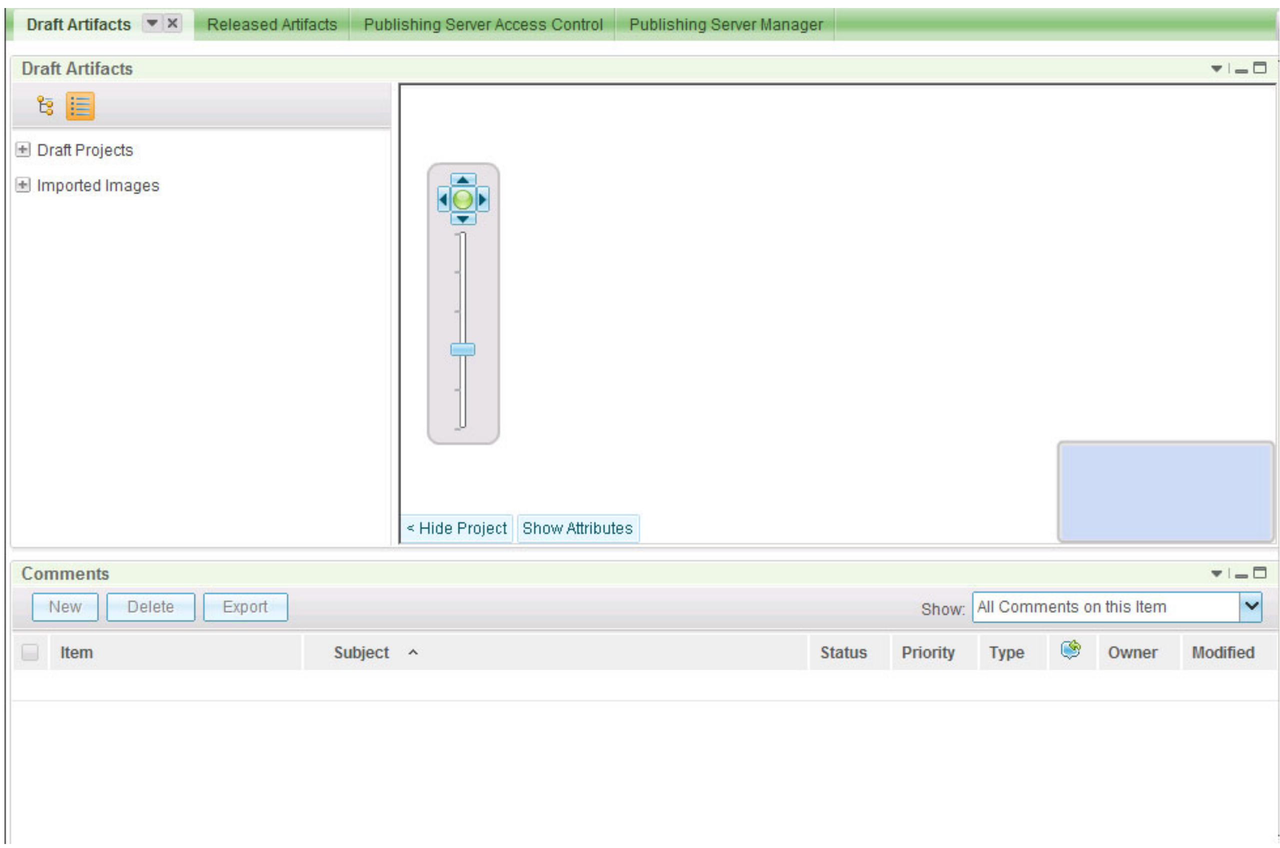


Part 3: Reviewing Draft Projects

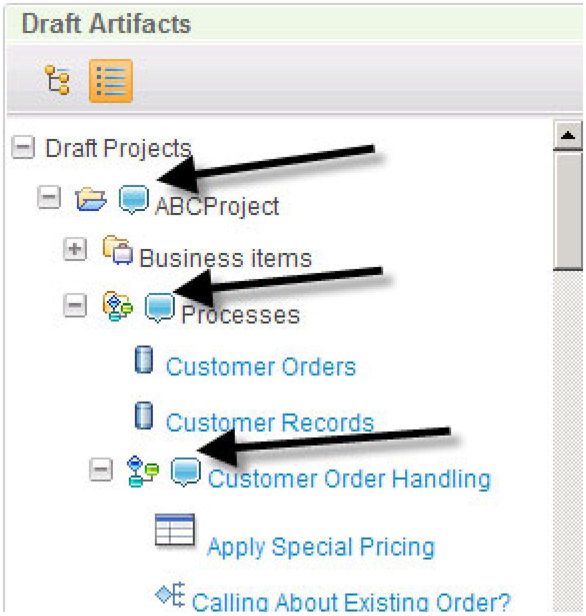
__ 1. Click the **Draft Artifacts** link from the Business Space Manager page.



The **Draft Artifacts** widget is displayed.



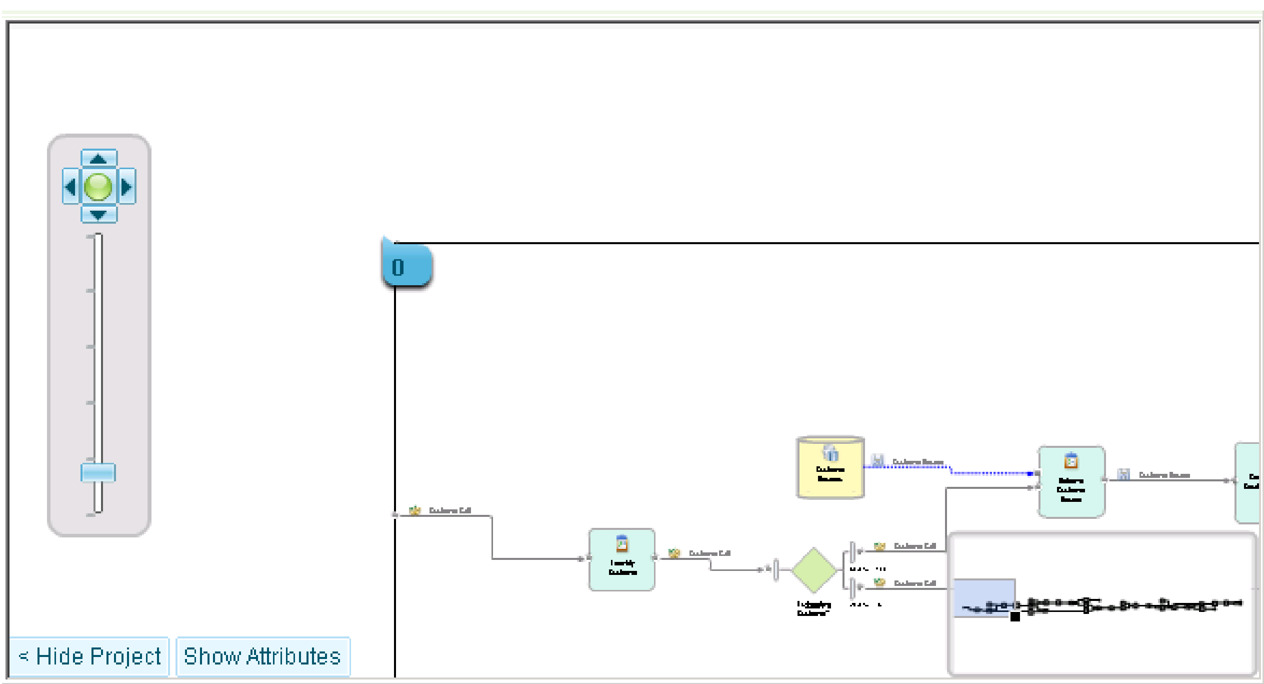
__ 2. Expand the **Draft Projects**.



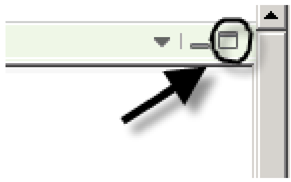
The comment symbols represents comment(s) existing on the project or its elements.

__ 3. From the Draft Projects, select the **Customer Order Handling** process from the project tree.

The right panel will be displayed as follows:



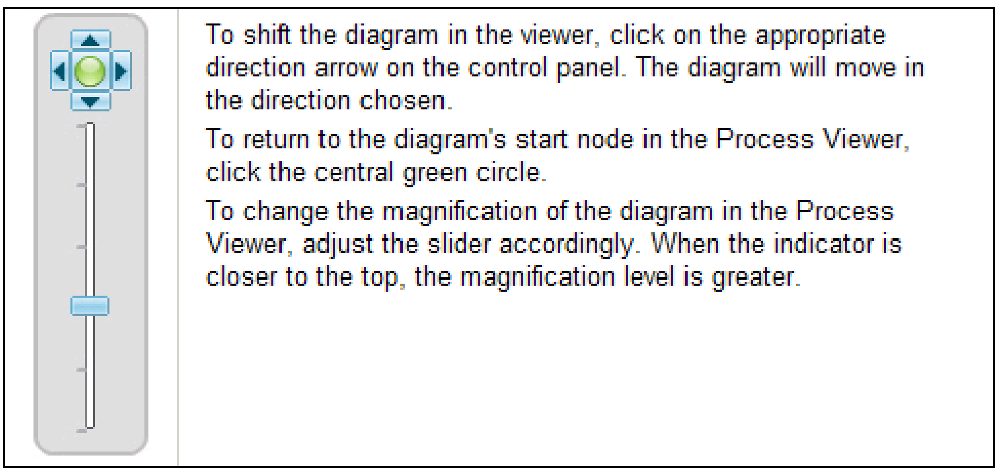
__ 4. Each widget can be maximized to display the full view. To view the process diagram only, click **Maximize** icon from the menu.



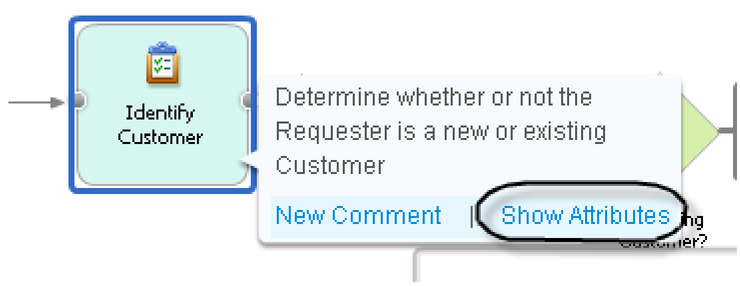
__ 5. Examine the diagram in the **Model Elements** portlet which is similar to Modeler's diagram view.

To modify the way the diagram is displayed in the viewer, configure the settings on the control panel.

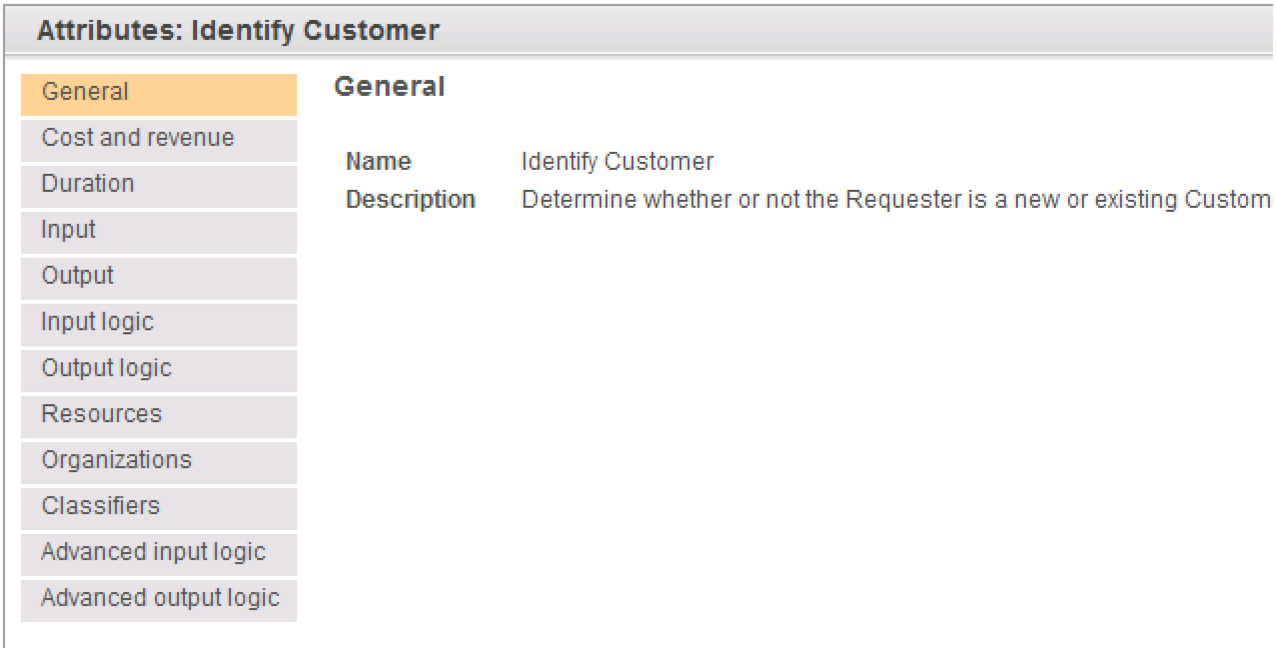
__ 6. Use the control panel to view the diagram..



__ 7. To view the attributes of the task, move your mouse to the task and select **Show Attributes**



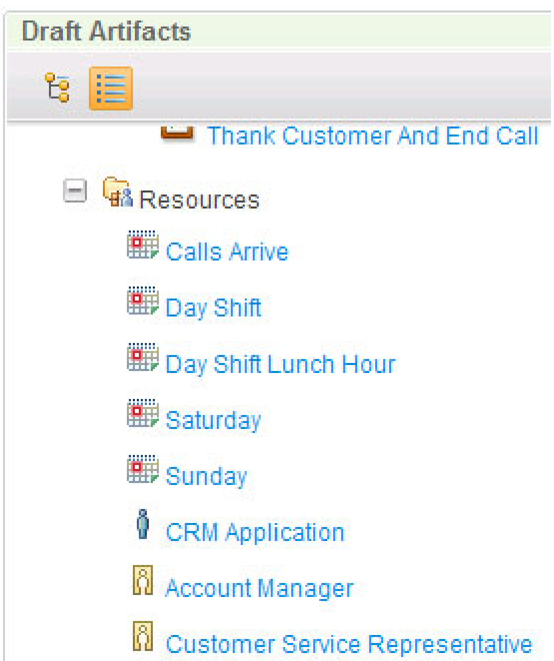
__ 8. The Attributes window displays.



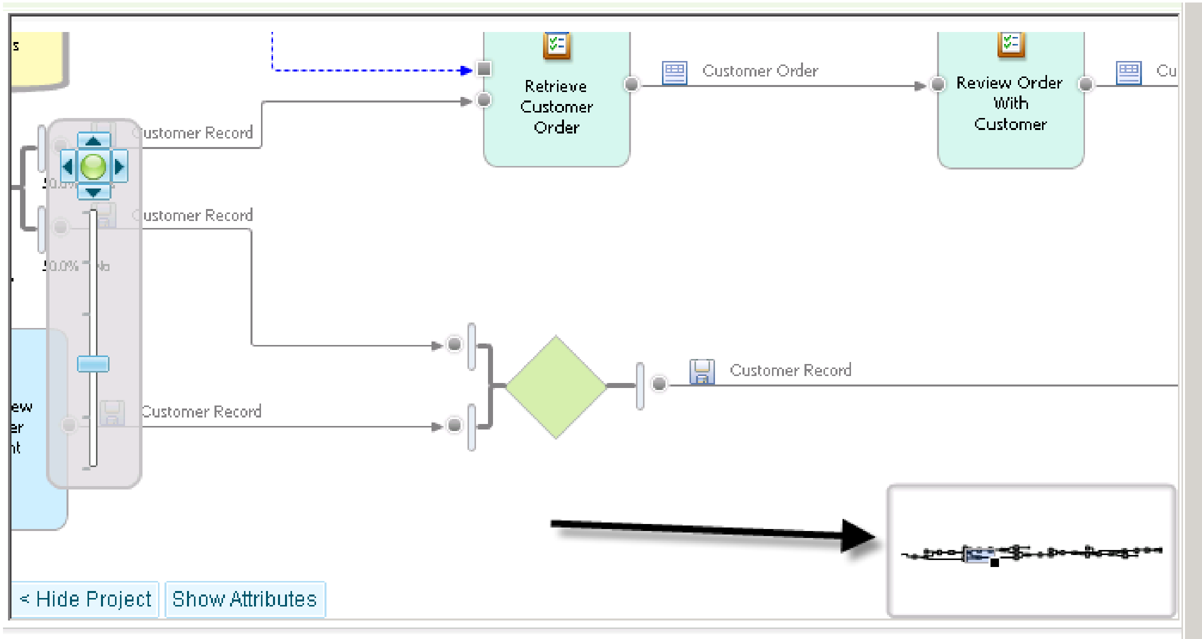
__ 9. Select each tab on the left panel to examine the attributes details of the elements.

__ 10. Click **Close** when finish.

__ 11. Examine other elements, such as resources, roles, timetable, and others in the Project Tree.



__ 12. Examine the **Overview** on the diagram.



The overview shows a miniaturized version of the overall diagram with a blue box inside to show the part of the diagram that is currently displayed in the Process Viewer.

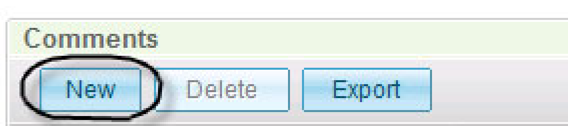
To move the diagram in the viewer using the overview, click and drag the blue box.

To adjust the magnification of the diagram in the viewer using the overview, click the handle on the corner of the blue box and adjust the size accordingly. The diagram in the Process Viewer adjusts automatically to match the overview.

Part 4: Adding comments

__ 1. To add a comment to a task, use the mouse to hover the task and click the **New comment** from the box.

__ 2. You may also select the task, and click the **New** button from the Comments widget



__ 3. Enter the detail information for this comment:

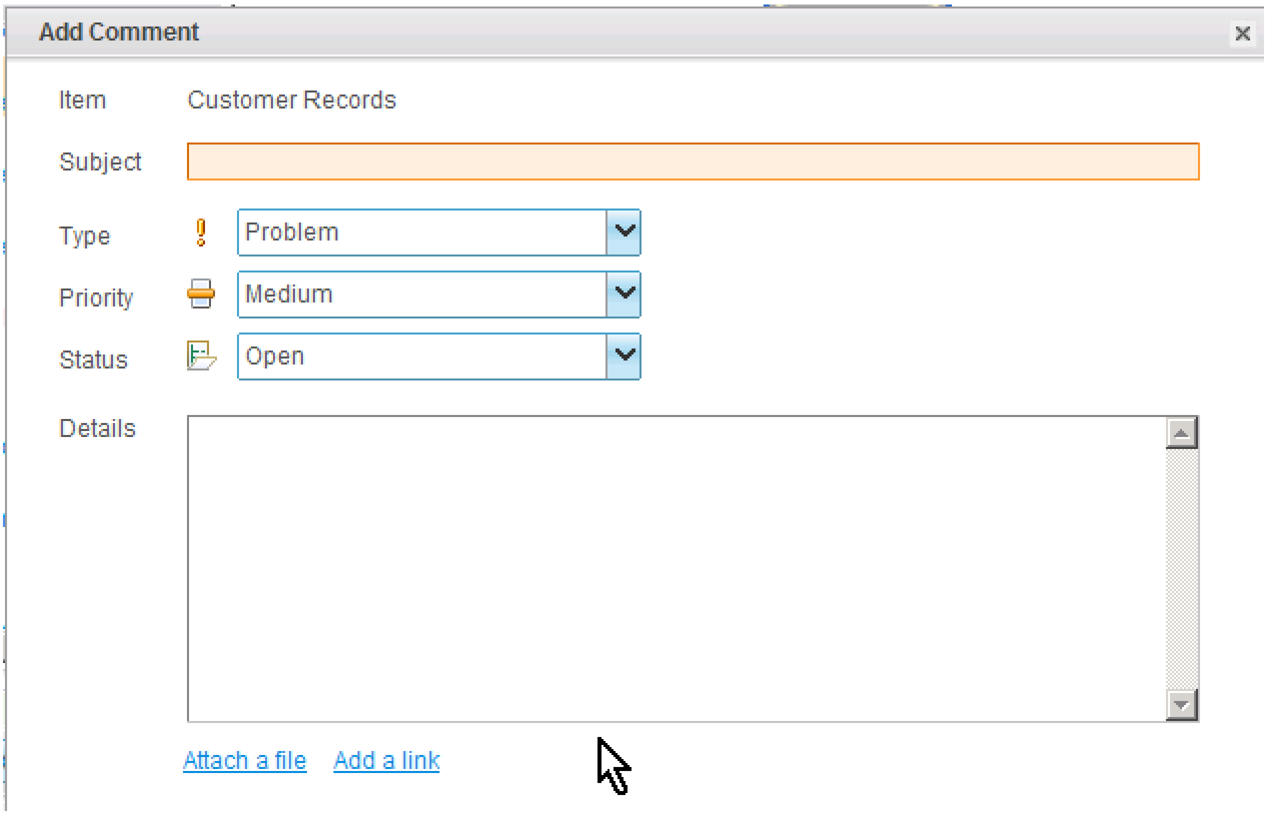
Subject: {enter a subject}

Type: {enter type of comment}

Priority: **`Medium`**

Status: **`Open`**

Details: {enter details here}



You can attach a file or a URL along with your comment using the attachment feature.

__ 4. Click **Attach a file** link.

__ 5. Click **Browse** to add the file using the following path:

`C:\IBM\WBModeler62\licenses\wbmodeler_license.txt`

__ 6. Click **Attach a link** link.

__ 7. To add the link, enter the following address:

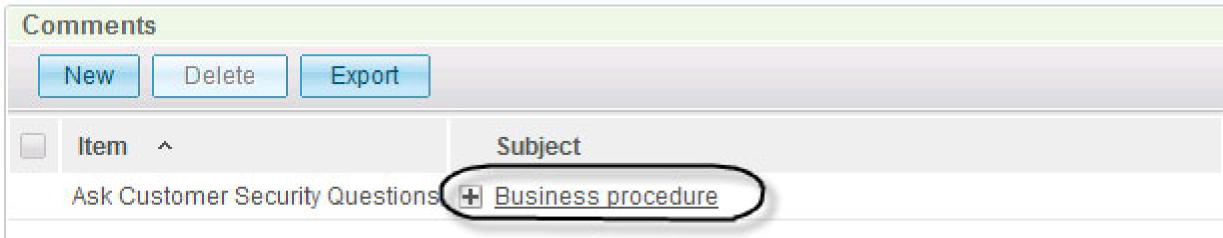
`www.ibm.com`

__ 8. Click **Submit** to add the new comment.

Part 5: Editing comment

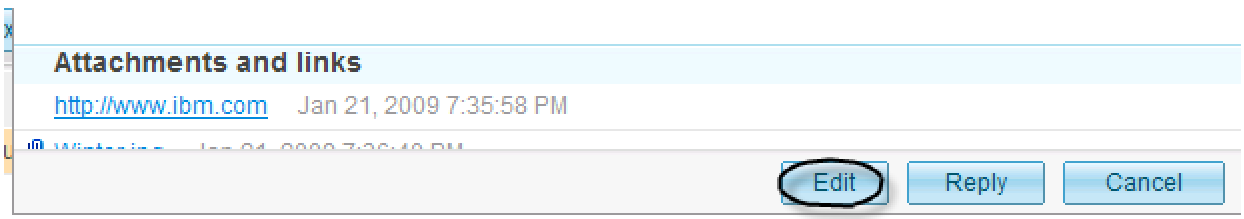
You can edit an existing comment or delete the attachment.

__ 1. To retrieve your comment, click the link of the comment that you created from the previous step on the subject column.



The View Comment window will display the comment that you selected.

__ 2. Click the **Edit** button to edit the content of the comment.



__ 3. Once you are done editing, click the **Attach a file** link to attach more files or to delete the existing attachments, or to add more links or files.

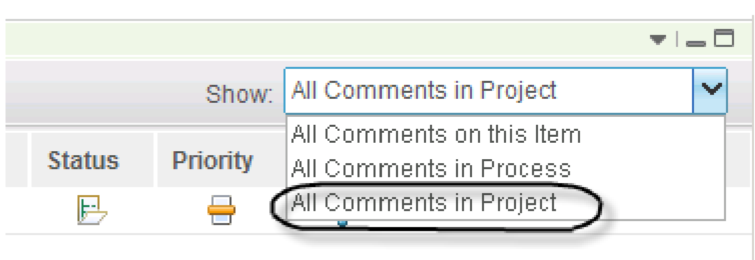
__ 4. You may delete the attachment by clicking the **Remove** link.

__ 5. Once you are done with the attachments, click **Save** button.

Part 6: Exporting comments

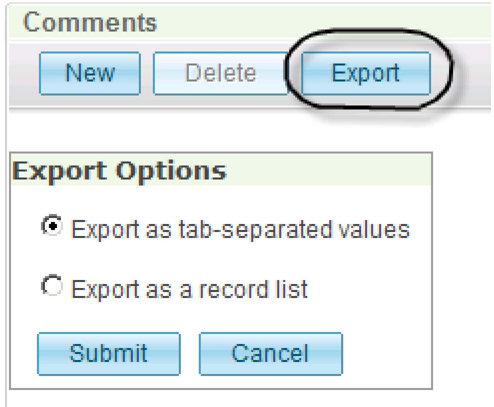
You can export selected or all comments to an external file. In this section, you will export all the comments for this project.

__ 1. To select all comments, select **All comments in Project** from the pull-down menu in the upper right of Comments widget:



__ 2. To export the comments, click the **Export** button in the Comments view.

There are two export options.



__ 3. Select one of the options to export.

__ 4. Click the **Submit** button.

A File Download window will open.

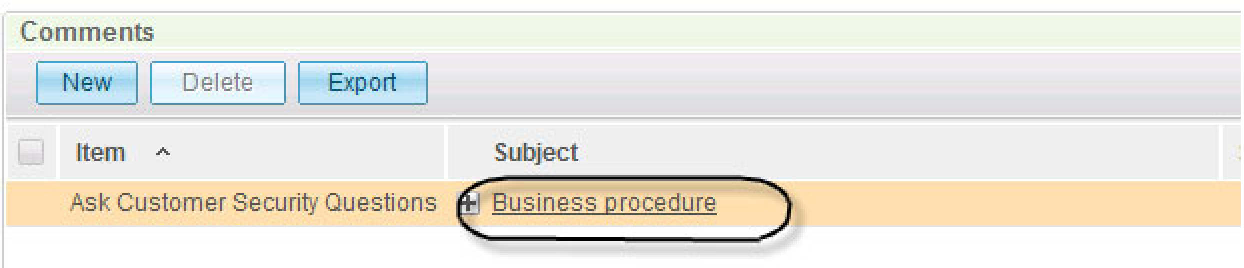
__ 5. Click **Open** to examine the output file.

__ 6. **Close** the comment.txt file.

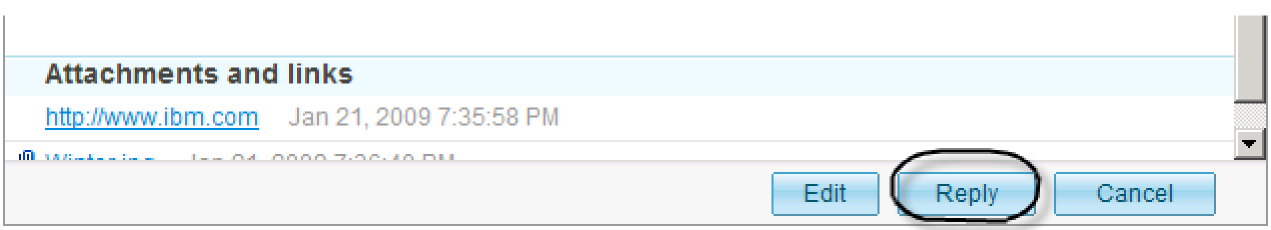
Part 7: Adding a response

You will add a response to a comment which was created from another user.

__ 1. From the **Comments** widget, select a comment by clicking the subject link.



__ 2. Click the **Reply** button.



__ 3. To add a response to a comment, enter your response in **Details**.

__ 4. Click the **Submit** button.

The response has been recorded.

__ 5. Click the comments link again to examine the response that was just added.

__ 6. Click **Restore** to return to default view.

__ 7. Click **Log out** to exit.

__ 8. Close the internet browser.

Part 8: Logging in as a view-only user

You will log in as **`VIEWER,`** a **view-only** user, to view the draft artifacts. This user does not have any access right to add any new comment.

__ 1. To open a Web browser, select **Start > Programs > Internet Explorer**.

__ 2. Click **Favorites** icon from I**nternet Explorer**, and select **Business Space powered by WebSphere**.

__ 3. Click **Continue to this Web site (not recommended)**:

Business Space login screen displays.

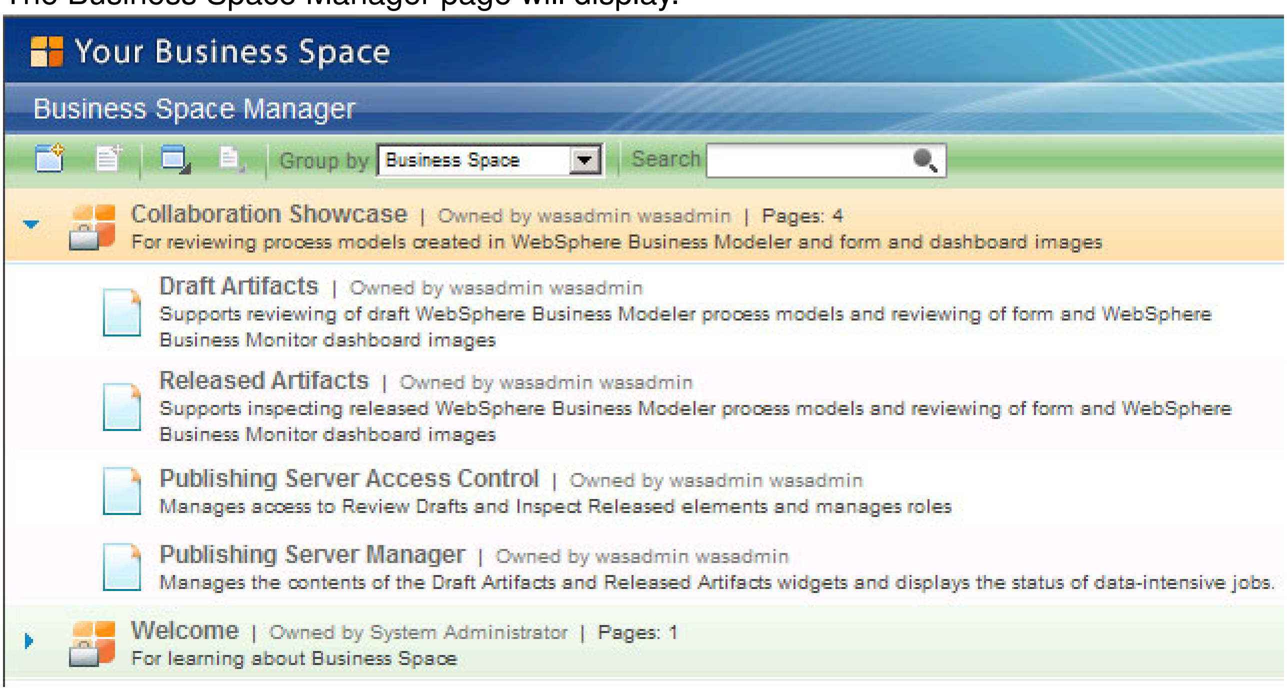
__ 4. A logon screen will display, enter the following User ID and password:

User ID: **`VIEWER`** (not case sensitive)

Password: **`VIEWER`** (not case sensitive)

__ 5. Click the **Login** button.

The Business Space Manager page will display.



__ 6. Click the **Draft Artifacts** link from the Business Space Manager page.

__ 7. From the **Draft Project Tree**, select the **Customer Order Handling** process which has an existing comments.

In the Comments widget, there is a comment added by another user.

__ 8. Click the Subject link to view the comment.

__ 9. Both the **Edit** and **Reply** button are inactive.

As a view-only user, you are only allowed to view the content of the project, and you are not allowed to add any response. However, if there is any attachment, you will be able to download the attachment.

__ 10. Click **Log out** to exit.

Part 9: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. What is modeling team composition?

____

__ 2. What are the effects of renaming, importing, moving, and deleting elements on publishing?

____

__ 3. Review the flashcards for this unit.

End of exercise

Exercise 14.Importing from Microsoft Visio

Estimated time

00:30

What this exercise is about

This exercise covers importing from Microsoft Visio.

What you should be able to do

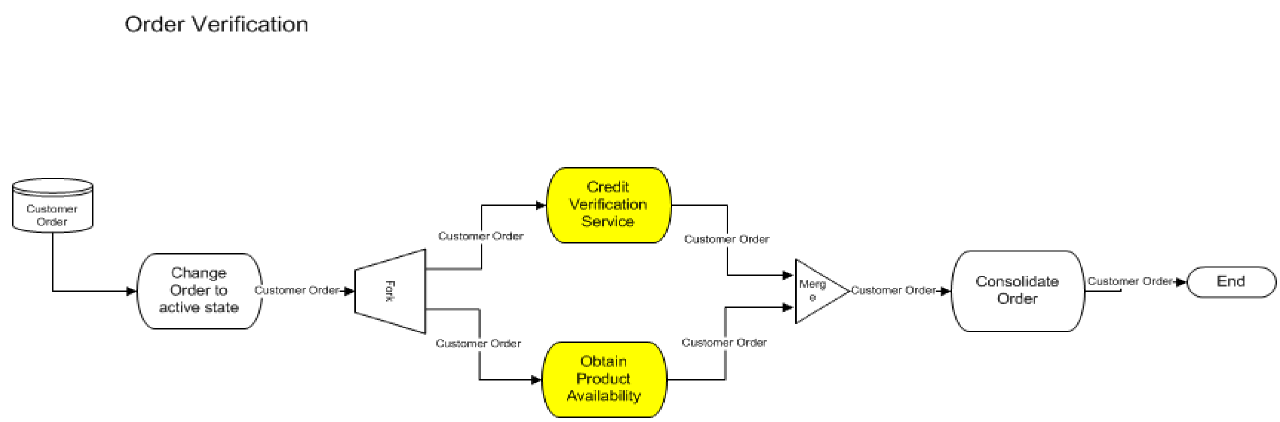
At the end of the exercise, you should be able to:

- Import a model from Microsoft Visio
- Map unrecognized Visio objects to Modeler objects
- Update model after conversion

Exercise instructions

Part 1: Importing from Visio

This part of the exercise walks you through the import of the following process model from Microsoft Visio into WebSphere Business Modeler:



Note

If Microsoft Office Visio or Microsoft Visio Viewer is installed on your system, you can view the Visio diagram by browsing to the appropriate location (`C:\IBM\WBModeler62\samples\visio`), extracting the `visioDiagramSamples.zip` file and opening the document `ABC Project.vdx`.

__ 1. Launch WebSphere Business Modeler and use the following workspace:
`C:\workspaces\Lab14_workspace`

Part 2: Importing a model from Modeler

__ 1. Check that the modeling mode is **Advance**.

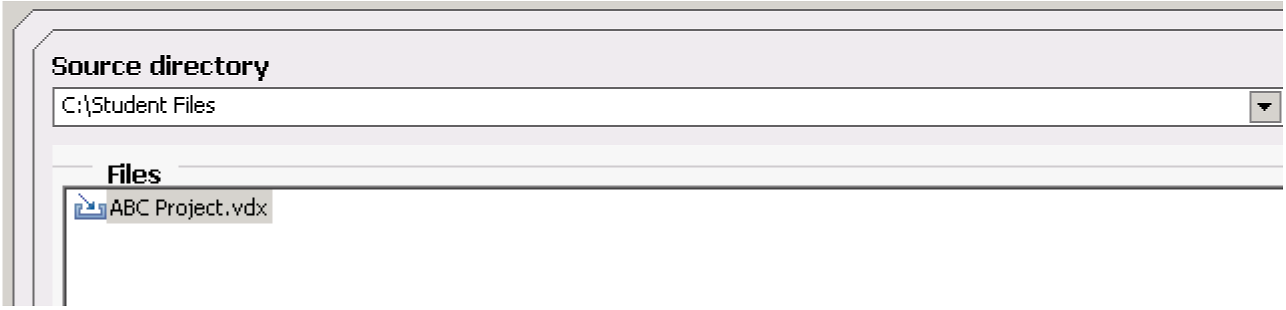
__ 2. Right-click inside the Project Tree and select **Import**.

The Import wizard appears.

__ 3. Select **Microsoft Visio (.vdx)** and click **Next**.

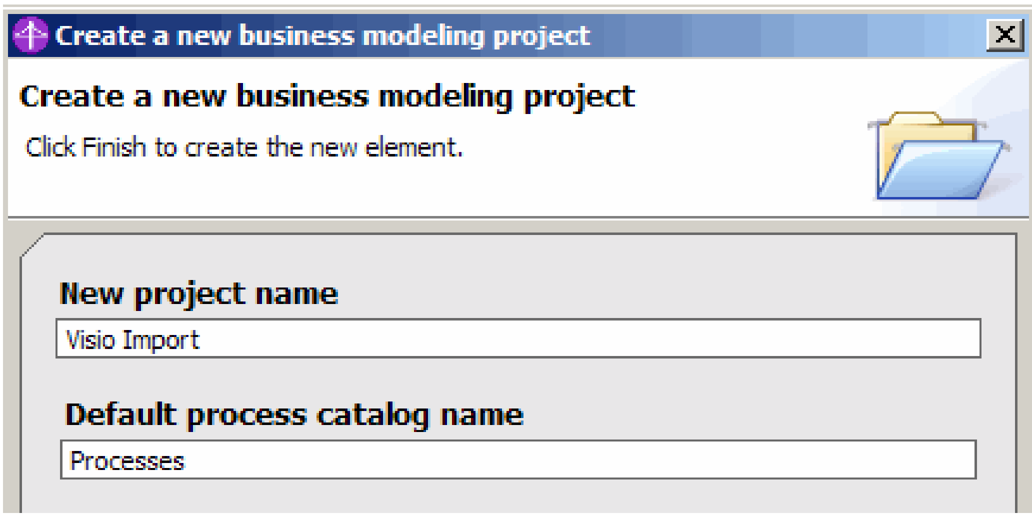
__ 4. Click the **Browse** button and navigate to the following directory and click **OK**:
`C:\Student Files`

__ 5. Under **Files**, select **`ABC Project.vdx`**.



__ 6. Under **Target project**, click the **New** button to create a new project.

__ 7. Under **New project name**, enter **`Visio Import`**.

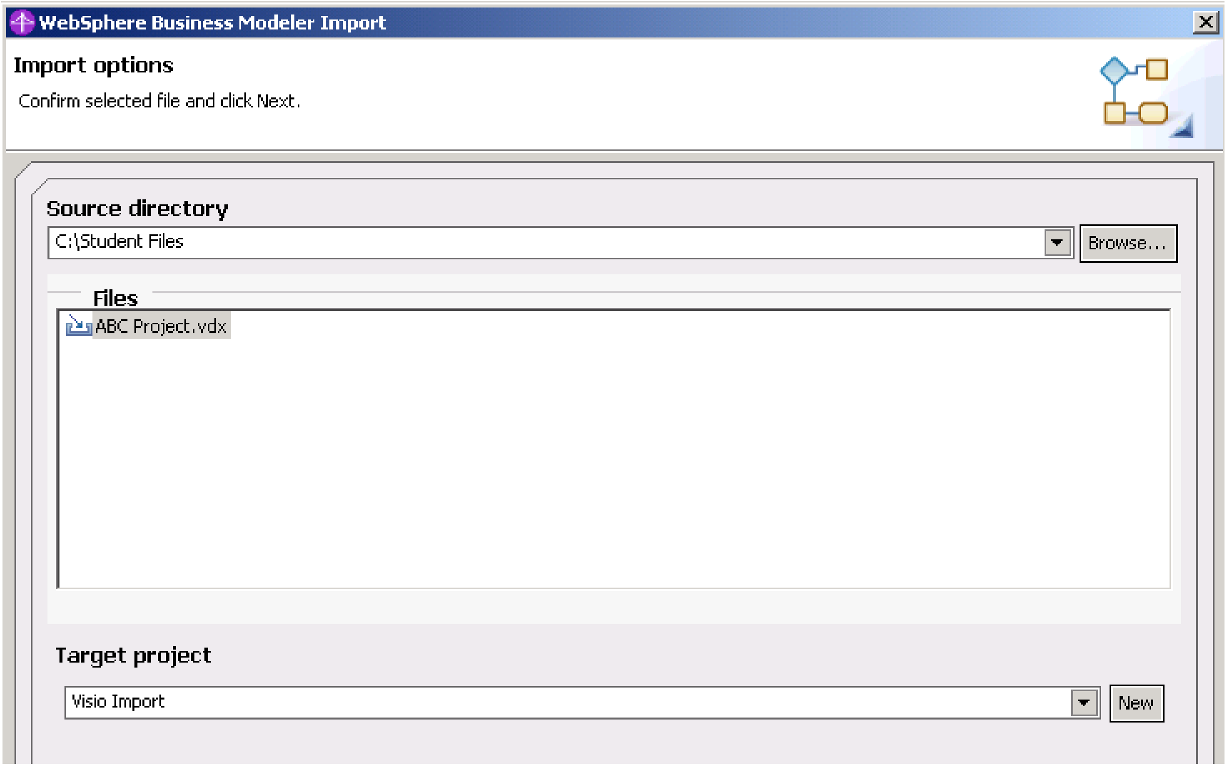


__ 8. Verify that the **Create process** check box is cleared.

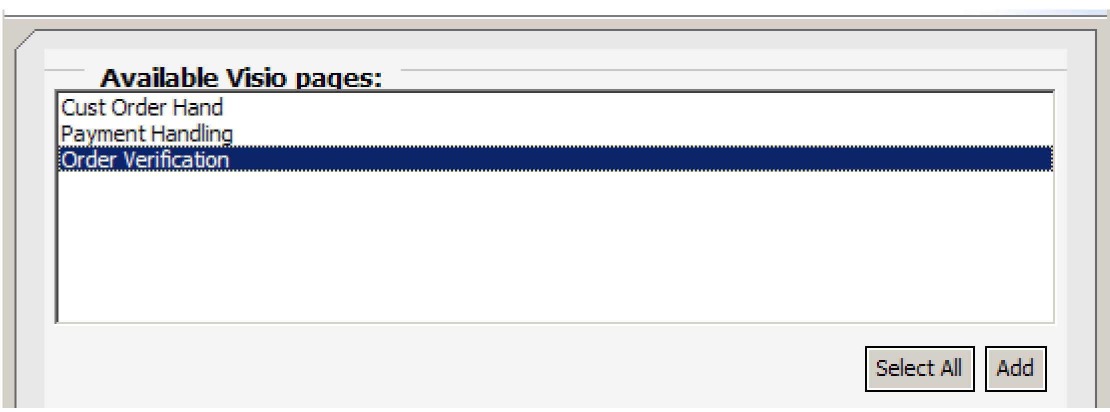
__ 9. Click **Finish**.

It will take a few moments for the project files to be created.

___ 10. Once the new project has been created, click **Next** from the **Import** window.



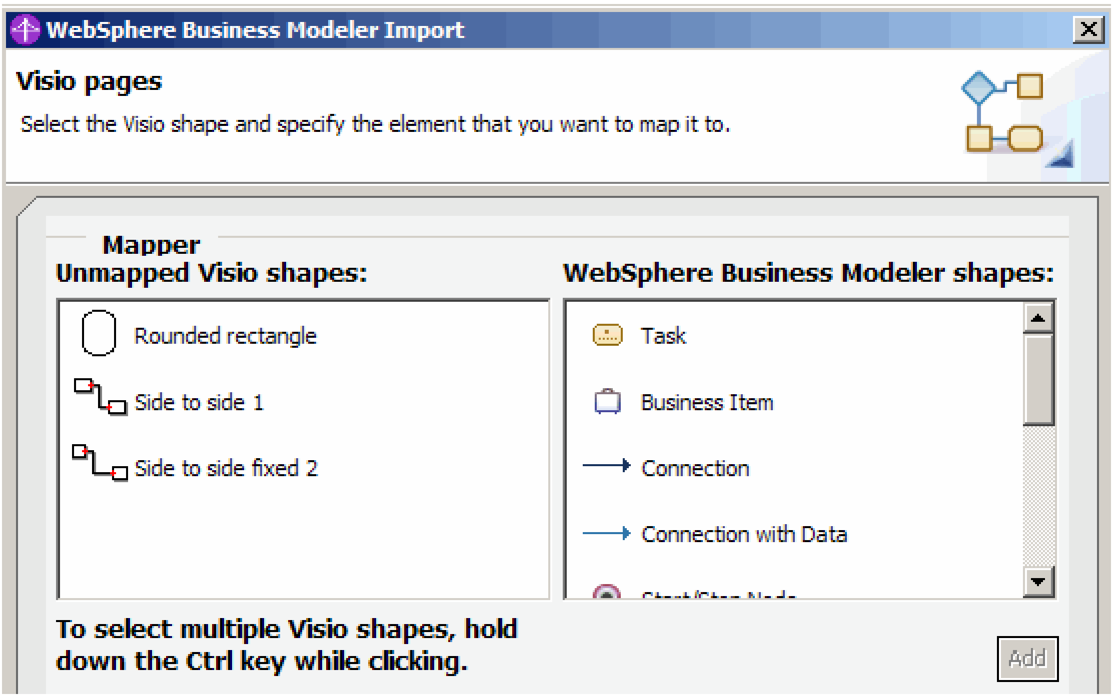
___ 11. Under **Available Visio pages**, select **Order Verification.**



___ 12. Click **Add**.

__ 13. **Order Verification** now appears under **Currently selected pages**.

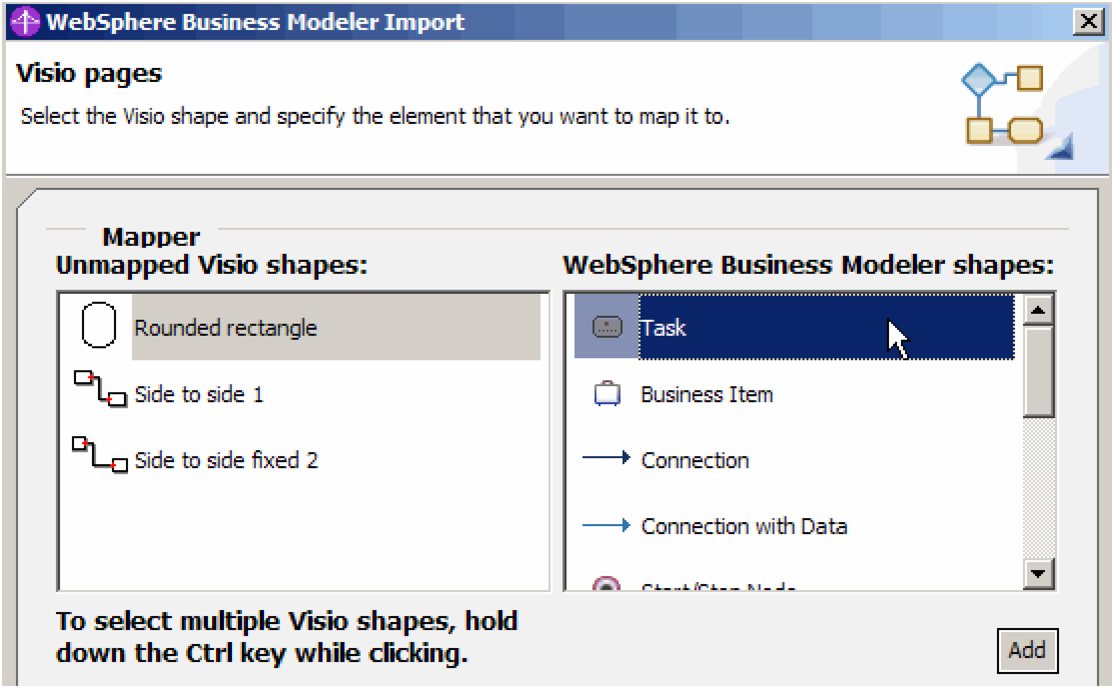
__ 14. Click **Next**.



Imported Visio shapes that are not yet mapped are shown in the upper **Unmapped Visio shapes** list. You can select each of them in turn (or select several by holding down the Ctrl key) and select the Modeler element to which to map them.

__ 15. Under **Unmapped Visio shapes**, select **Rounded rectangle** from the list.

__ 16. Map this Visio object to the task object in Modeler by selecting **Task** in the list under **WebSphere Business Modeler shapes** and clicking **Add**.



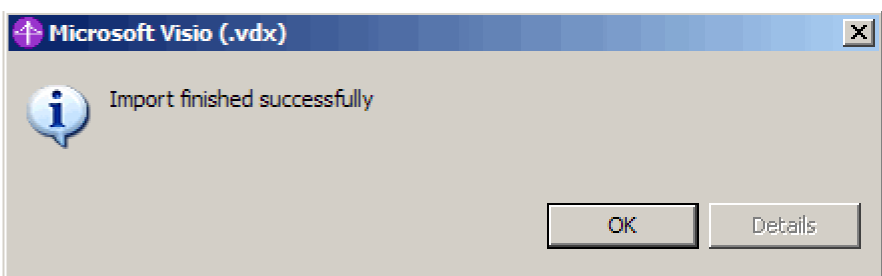
__ 17. Map **Side to side 1** to **Connection with Data** and click **Add**.

__ 18. Map **Side to side fixed 2** to **Connection with Data** and click **Add**.

There should be no other unmapped Visio shapes listed.

Note: By default, any shape left unmapped is mapped to a task.

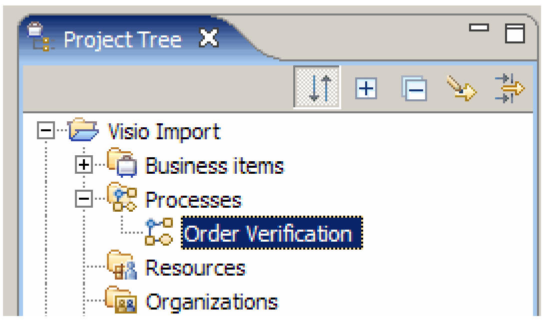
__ 19. Click **Finish**. Upon completion, the message **Import finished successfully** is displayed.



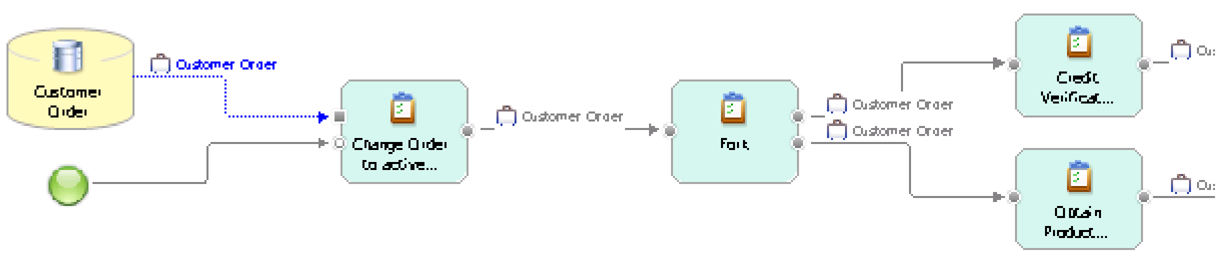
__ 20. Click **OK** to close the message.

Note: If you receive an error or warning message instead, click the **Details** button to identify and resolve the problem.

__ 21. To view the imported process, navigate to the **Visio Import** project in the Project Tree and double-click the **Order Verification** process.



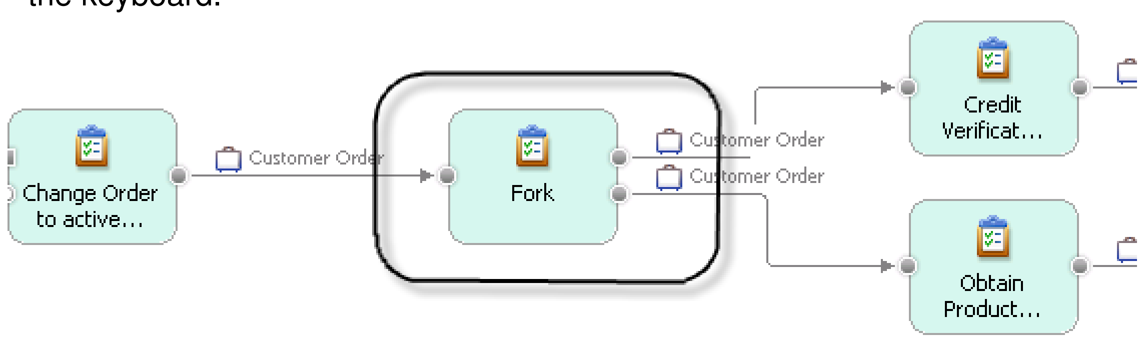
The process opens in the process editor.



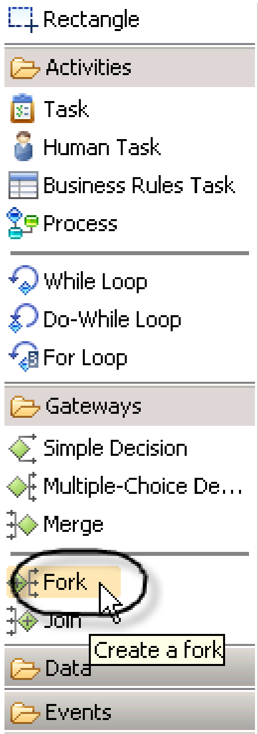
Part 3: Remapping the fork object

Convert the **Fork** task to the **Fork** object in Modeler:

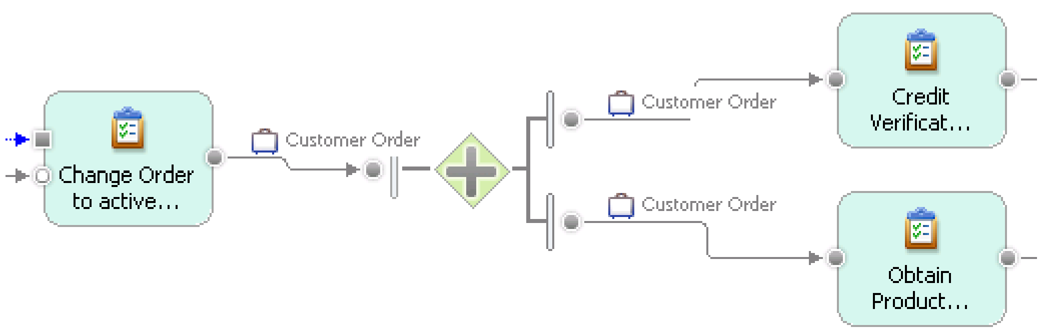
__ 1. Delete the task labeled **Fork** by selecting the task and pressing the Delete key on the keyboard.



__ 2. Select the **Fork** element from diagram palette (click the small arrow in the **Create join** button) and drop it onto the process diagram, in place of the deleted **Fork** task.

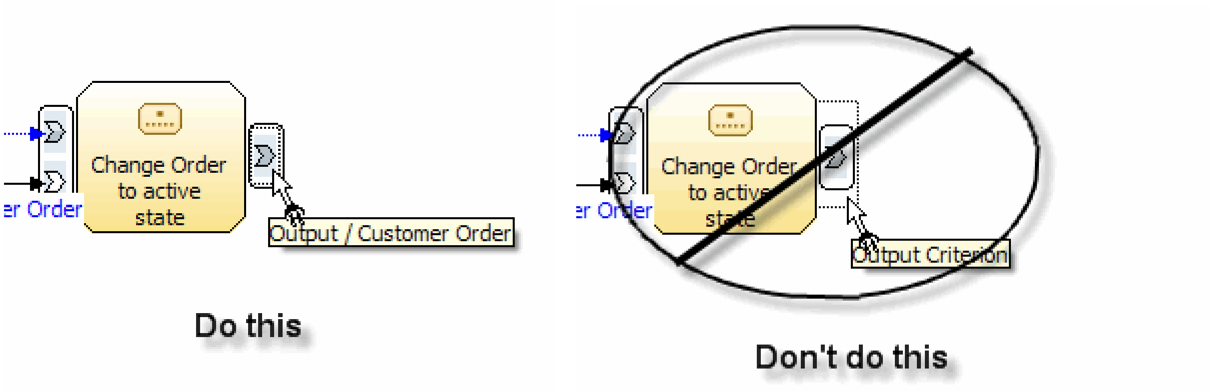


__ 3. Connect the **Fork** to the surrounding elements as follows:



Note

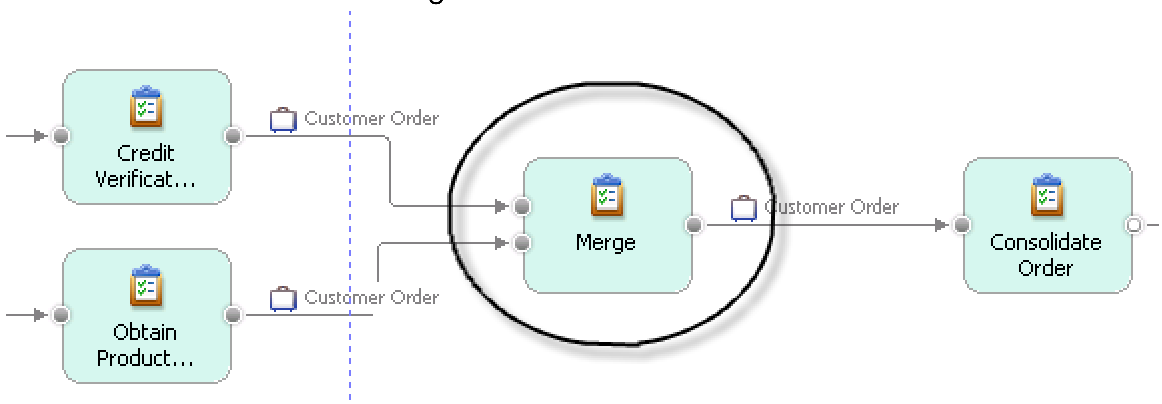
If using original style, when connecting each element, select the input-output icon, and not the criterion box.



Part 4: Remapping the merge object

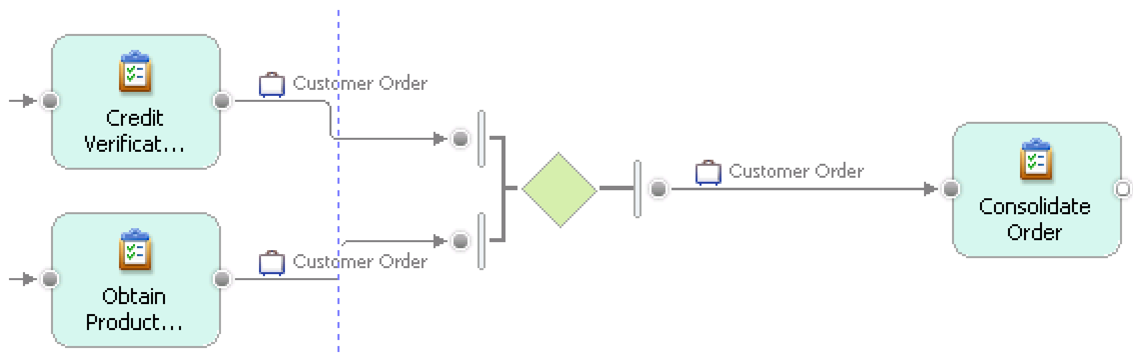
Convert the merge task to the merge object in Modeler:

__ 1. Delete the task labeled Merge.



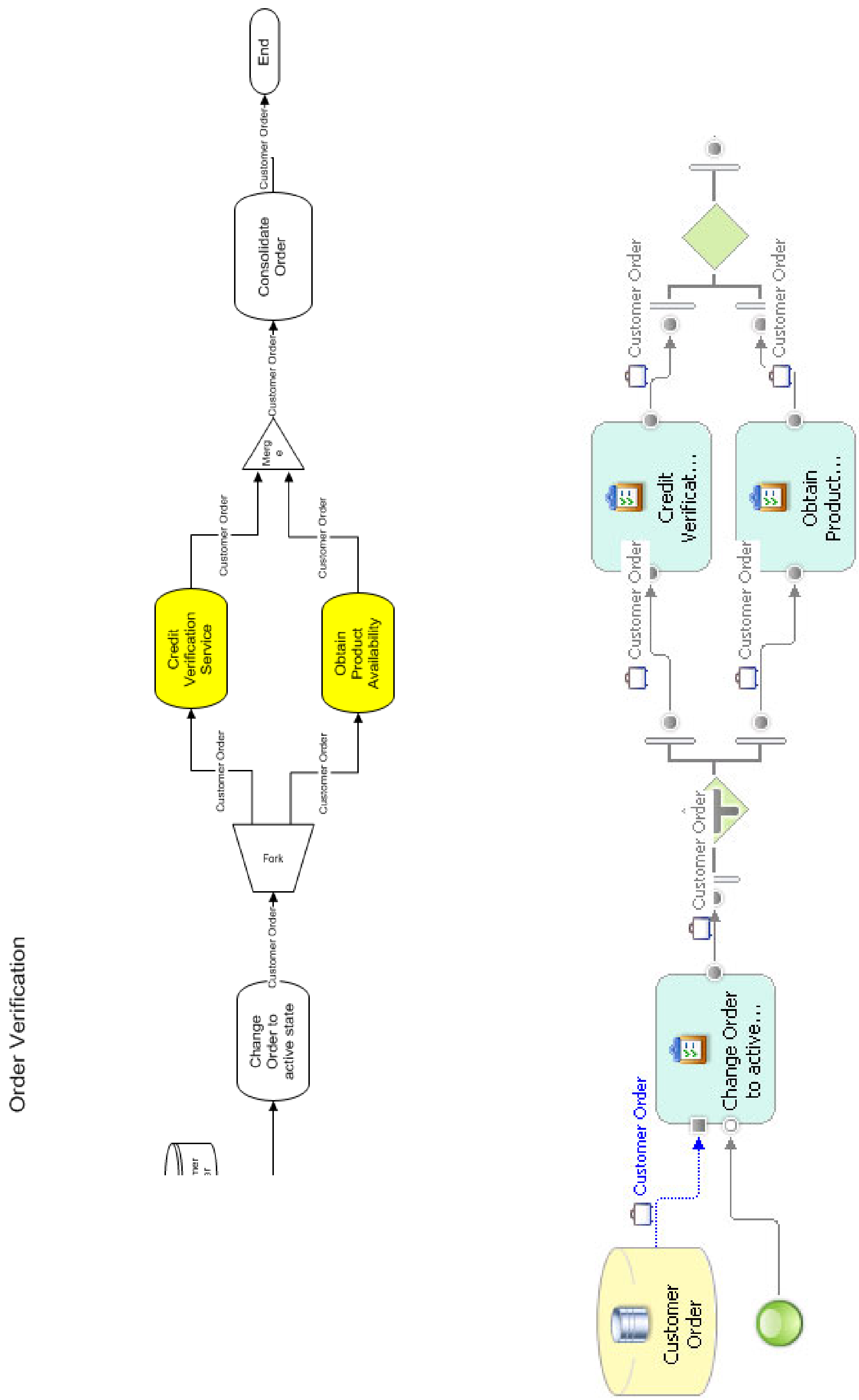
__ 2. Select the merge object from the Gateways drawer and drop it onto the process diagram, in place of the deleted merge task.

__ 3. Connect the merge to the surrounding elements as follows:



__ 4. Save the model (Ctrl+S).

The full model should now look as follows (compare this to the Visio model):



Part 5: Importing delimited text file

You can import specially formatted delimited text files into WebSphere Business Modeler.

Only the following elements can be created by importing from delimited text files:

- Business item templates, business items
- Resource definition templates, resource definitions, resources, roles
- Organization definition templates, organization definitions, organization units
- Reusable tasks (tasks that appear in the Project Tree)

In this part of the exercise, you will be importing the **`BusinessItemSample.csv`** and **`BusinessItemTemplateSample.csv`** files.

Note

You can view both the **`BusinessItemSample.csv`** and **`BusinessItemTemplateSample.csv`** files by browsing to the appropriate location (**`C:\Program Files\IBM\WBModeler61\samples\delimitedText`**), extracting the **`delimitedTextFormsSamples.zip`** file and opening the **`BusinessItemSample.csv`** and **`BusinessItemTemplateSample.csv`**.

To view these files that have been provided to you in your Student Files folder:

__ 1. Browse to **`C:\Student Files`** and **double-click** the **`BusinessItemSample.csv`** or **`BusinessItemTemplateSample.csv`** file.

These files can also be opened with Notepad (right-click the file, select **Open With** and choose Notepad).

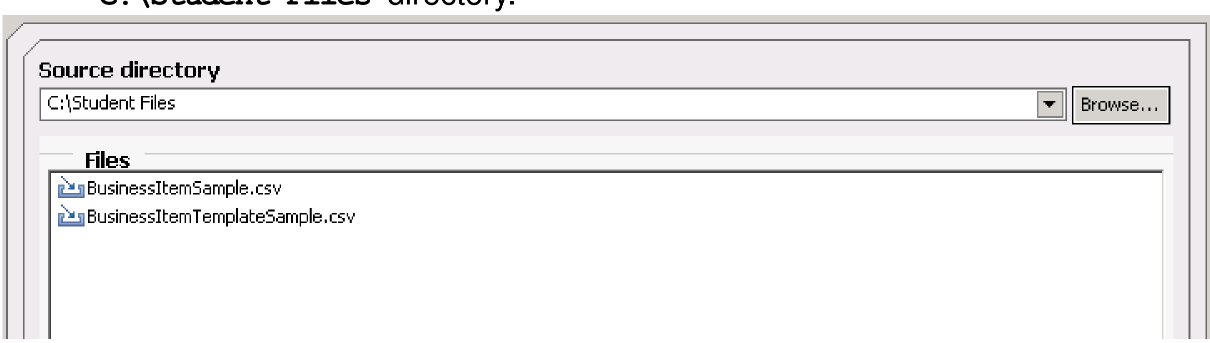
In this part of the lab, you will be importing the following data from sample folder:

Business Item Name	Description	Parent Template	Attribute Name	Attribute Description	Attribute Type	Attribute Minimum	Attribute Maximum	Attribute Ordered	Attribute Unique	Attribute Default Value
Customer Order		Order	Customer Address		Address	1	1	FALSE	FALSE	
			Pay by Credit Card		Boolean	1	1	FALSE	FALSE	
			Pay by Cash or Check		Boolean	1	1	FALSE	FALSE	
			Credit Status		String	1	1	FALSE	FALSE	
			Order Item		ABC Produ	1	5	FALSE	FALSE	
			Available Order Item		Boolean	1	5	FALSE	FALSE	
Address			Address Line 1		String	1	1	FALSE	FALSE	
			Address Line 2		String	1	1	FALSE	FALSE	
			City		String	1	1	FALSE	FALSE	
			Province		String	1	1	FALSE	FALSE	
			Country		String	1	1	FALSE	FALSE	
			Postal Code		String	1	1	FALSE	FALSE	
ABC Product		Product								
Order Request		Order	Customer Number		String	0	1	FALSE	FALSE	
			Requester Address		Address	0	1	FALSE	FALSE	
			Order Items		ABC Produ	1	5	FALSE	FALSE	
Customer Record		Record								

__ 2. In the Project Tree, right-click the **Visio Import** project and select **Import**. The Import wizard appears.

__ 3. Select **Delimited Text (.csv, .txt)** and click **Next**.

__ 4. Click the Browse button and navigate to the `C:\Student Files` directory.



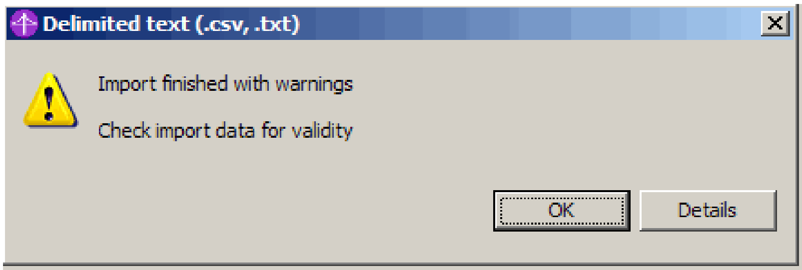
__ 5. Click **OK**.

__ 6. Under **Files**, select `BusinessItemSample.csv`.

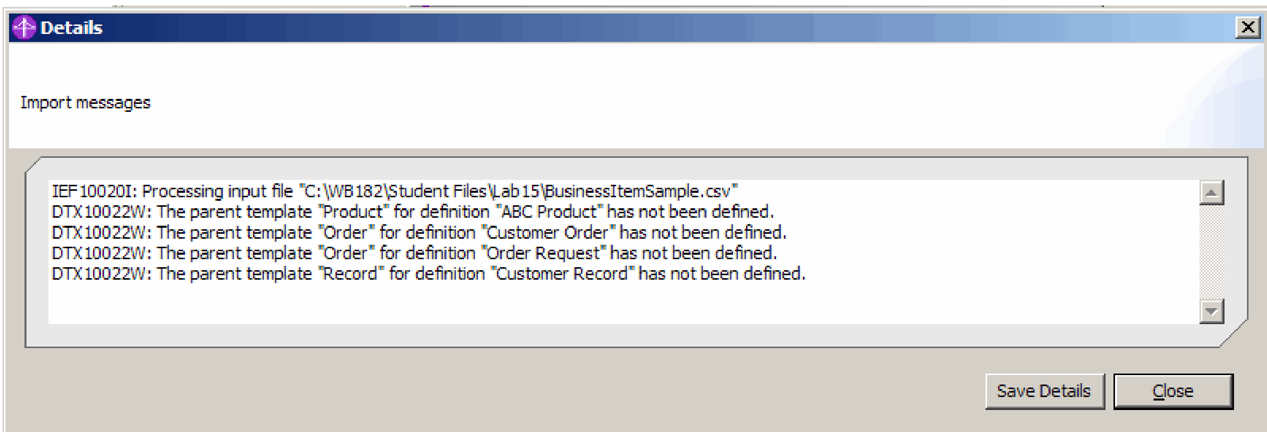
__ 7. Verify that the **Target project** is the **Visio Import** project and click **Next**.

__ 8. Accept the default values and click **Finish**.

A dialog box is displayed when the import process is complete.



__ 9. Click **Details** and review the messages.



The warnings will be resolved once you import the parent templates and assign the business items to the templates.

__ 10. Click **Close** and **OK**.

__ 11. From the **Visio Import** project in the Project Tree, expand the **Business items** catalog. Note that the following business items have been added:

- ABC Product
- Address
- Customer Order
- Customer Order_1
- Customer Record
- Order Request

If the importing element has the same name as the existing business item, Modeler will add "_1" at the end of the element name. In this case, you have both **Customer Order** and **Customer Order_1**.

__ 12. Examine both **Customer Order** and **Customer Order_1** that **Customer Order_1** has the updated attributes.

Part 6: Import business item template sample

In this part of the exercise, you will be importing the following data:

Business Item Template	Description	Parent Template	Attribute Name	Attribute Description	Attribute Type	Attribute Minimum	Attribute Maximum	Attribute Ordered	Attribute Unique	Attribute Default Value
Order	Defines the base attribute of an Order		Last Name		String	1	1	FALSE	FALSE	
			First Name		String	1	1	FALSE	FALSE	
			Order Number	Order Numbe	Integer	1	1	FALSE	TRUE	
			Order Date		Date	1	1	FALSE	FALSE	
			Delivery Date		Date	1	1	FALSE	FALSE	1/1/2005
Product			Product Name		String	1	1	FALSE	FALSE	
			Product Code		String	1	1	FALSE	FALSE	
Record			Last Name		String	1	1	FALSE	FALSE	
			First name		String	1	1	FALSE	FALSE	
			Customer Number		Integer	1	1	FALSE	FALSE	

__ 1. In the Project Tree, right-click the **Visio Import** project and select **Import**. The Import wizard appears.

__ 2. Select **Delimited Text (.csv, .txt)** and click Next.

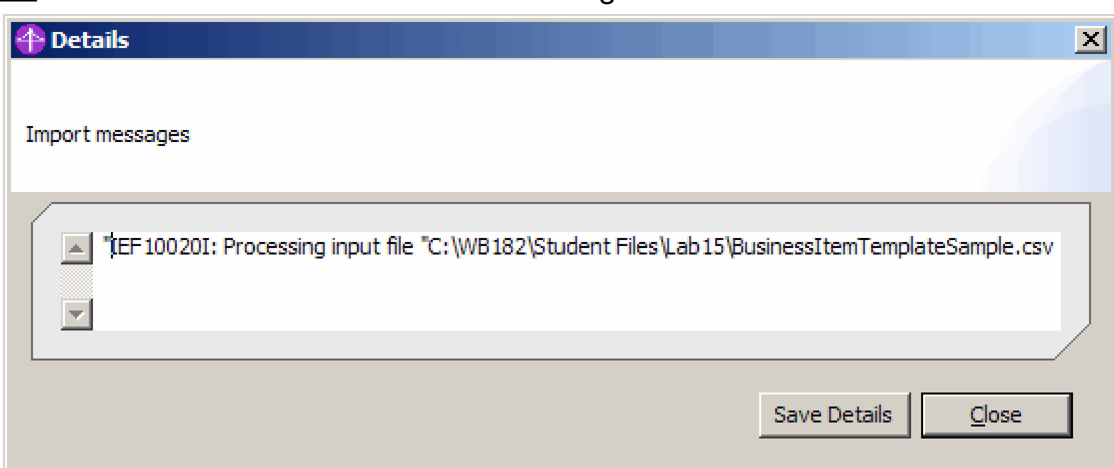
__ 3. Click the drop-down menu under **Source directory** and from the drop-down menu, select the following directory:
`C:\Student Files`

__ 4. Under **Files**, select **`BusinessItemTemplateSample.csv`**.

__ 5. Verify that the **Target project** is the **Visio Import** project and click **Finish**.

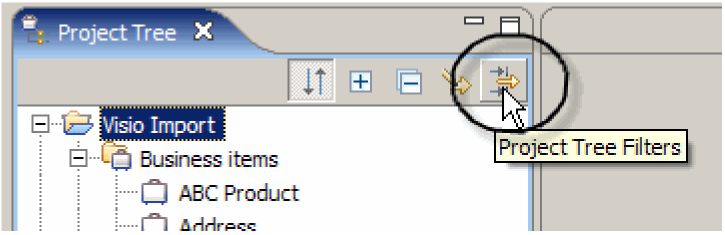
A dialog box is displayed when the import process is complete.

__ 6. Click **Details** and review the message.

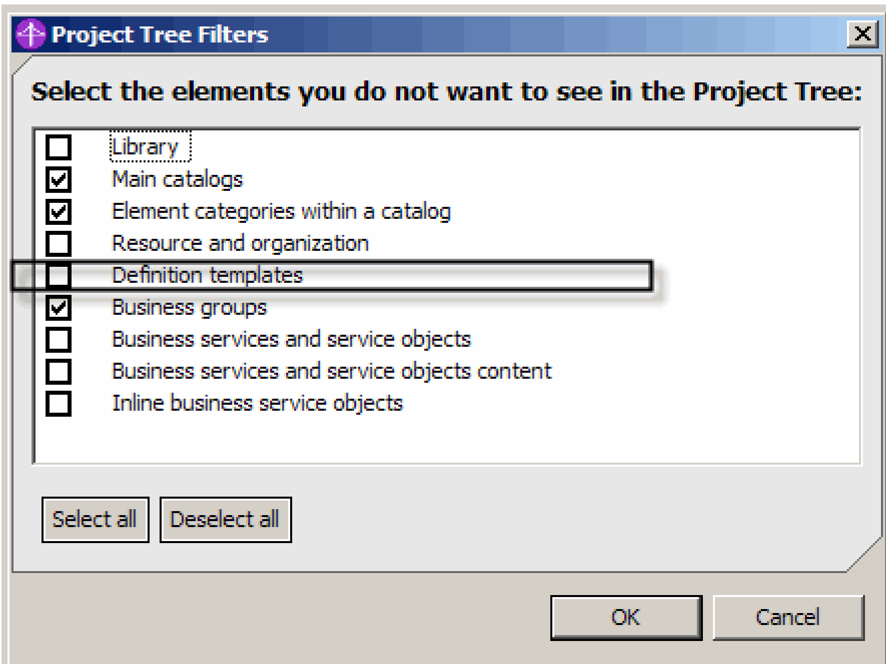


__ 7. Click **Close** and **OK**.

__ 8. By default, templates are not displayed in the Project Tree. To make templates visible, click the **Project tree filters** button on the toolbar at the top of the Project Tree.



__ 9. In the Project Tree Filters window, clear the **Definition templates** check box and click **OK**.

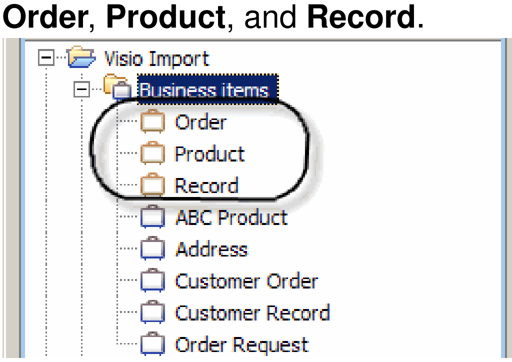


This enables definition templates to be displayed in the Project Tree.

__ 10. From the **Visio Import** project in the Project Tree, note the additions to the **Business items** catalog.

The following business item templates have been added:

Order, **Product**, and **Record**.

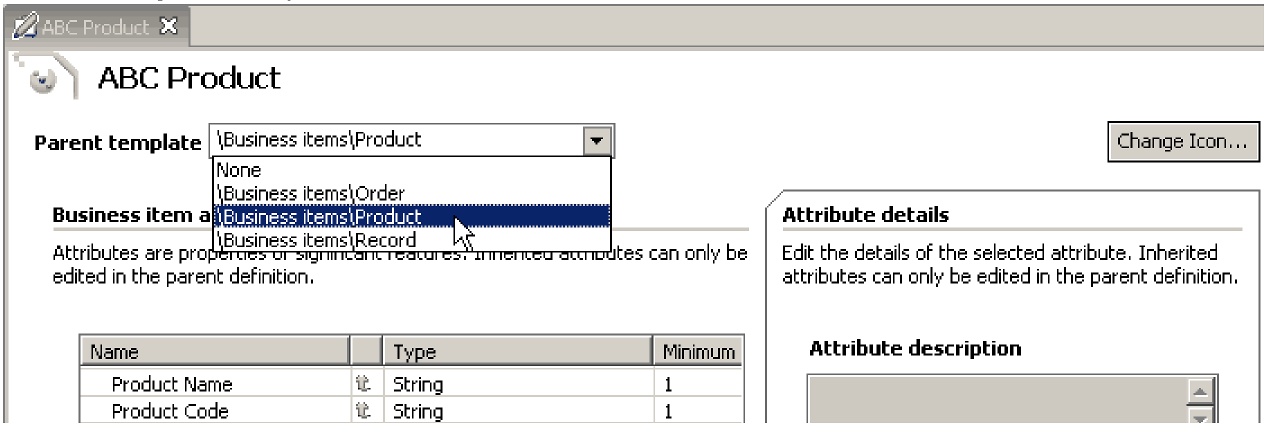


__ 11. Save changes (Ctrl+S).

Part 7: Resolve inconsistencies from import

__ 1. In the Project Tree, double-click **ABC Product** in the **Visio Import** project to open the business item.

__ 2. In the Business Item Editor, select `\Business items\Product` from the **Parent template** drop-down menu.



__ 3. Save (Ctrl+S) and close the **ABC Product** editor.

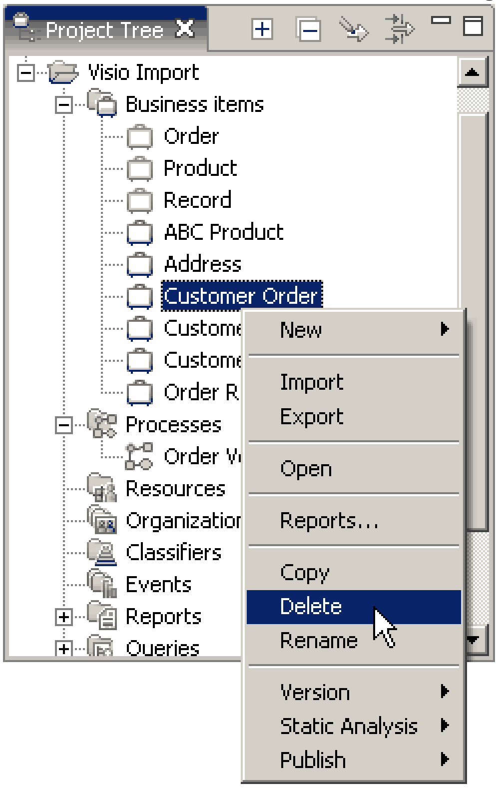
__ 4. Assign parent templates to the remaining business items as follows:

- Address - (no parent template needed)
- Customer Order - (no parent template needed)
- Customer Order_1 - **`Order`**
- Customer Record - **`Record`**
- Order Request - **`Order`**

These values originate from the `BusinessItemSample.csv` file (shown on first page of `Import Delimited Text File` section of this exercise).

__ 5. Save (Ctrl+S) and close all business item editors.

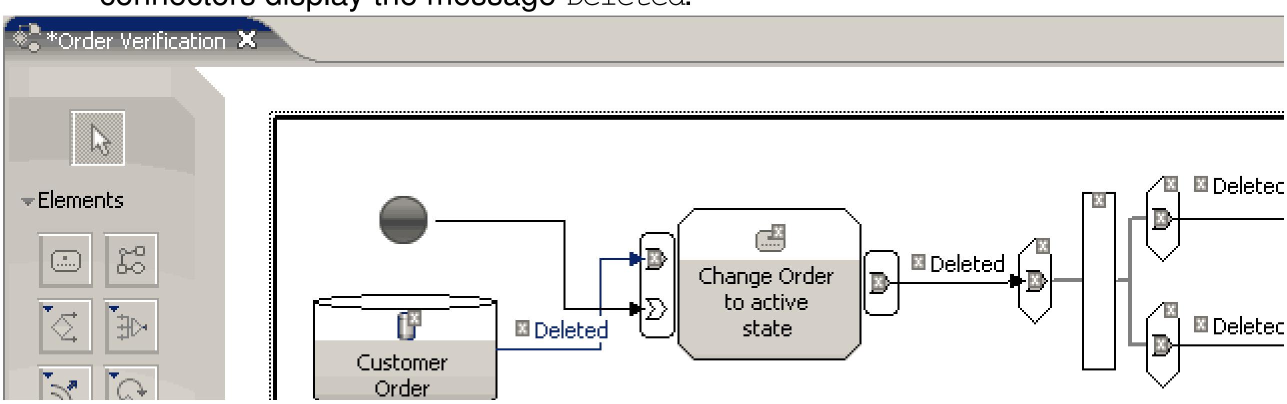
__ 6. From the **Visio Import** project in the Project Tree, right-click **Customer Order** from the **Business items** catalog and click **Delete**.



Alternatively, select Customer Order and press the Delete key on your keyboard.

__ 7. Click **Yes** to confirm the deletion.

Note that once the original `Customer Order` business item was deleted, all elements in the `Order Verification` process diagram have errors (red **X**s) and the connectors display the message `Deleted`.

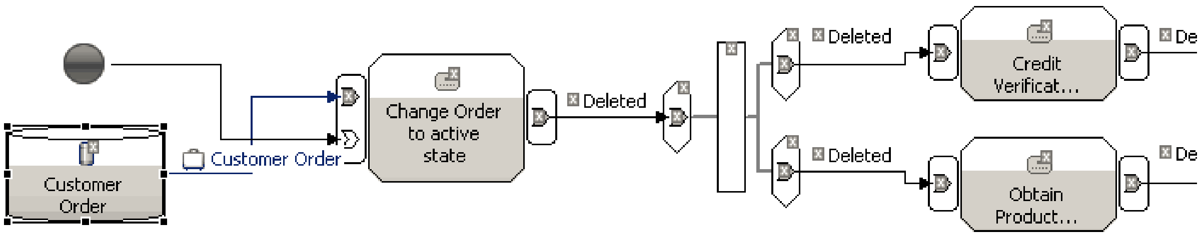


__ 8. ”Right-click `Customer Order_1` and click **Rename**.

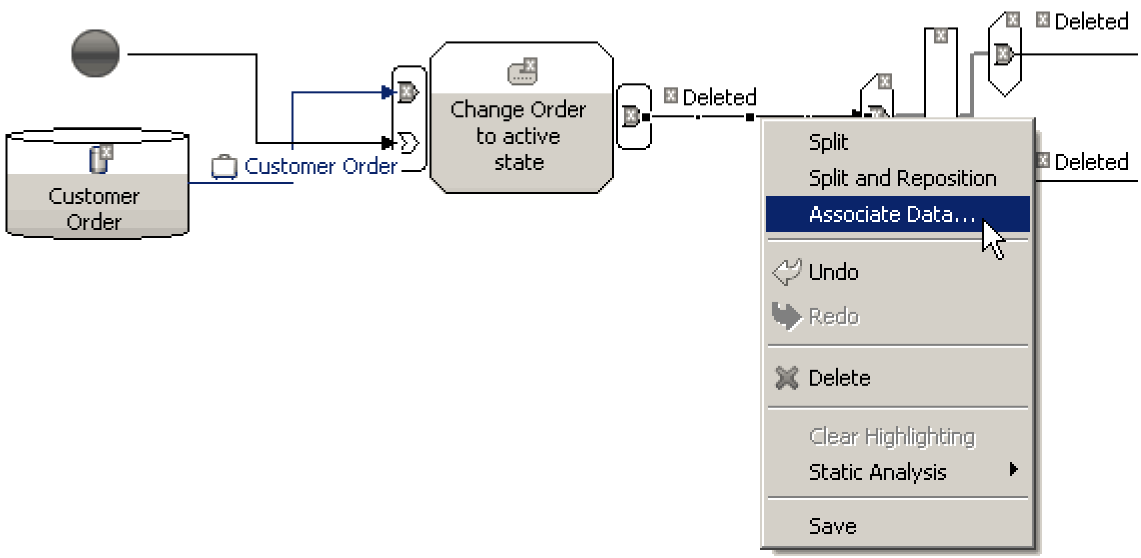
__ 9. Rename this item to **`Customer Order`** and press Enter.

__ 10. Drag the `Customer Order` business item from the Project tree and drop it on the `Customer Order` repository object in the process editor.

The blue connector between the repository and the `Change Order to active state` Task now has `Customer Order` as the associated data.

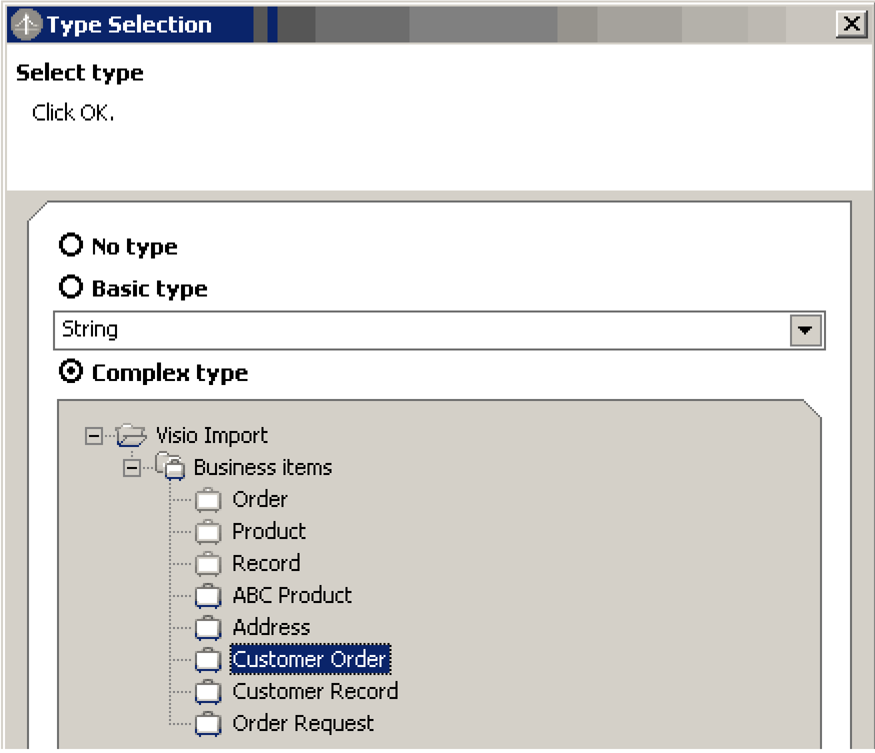


__ 11. Right-click the connector between the `Change Order to active state` Task and the `Fork` element and select **Associate data**.



The **Type Selection** window is displayed.

__ 12. Select **Customer Order** from the Business items catalog and click **OK**.



__ 13. Note that the outputs of the `Fork` object are automatically associated with `Customer Order`.

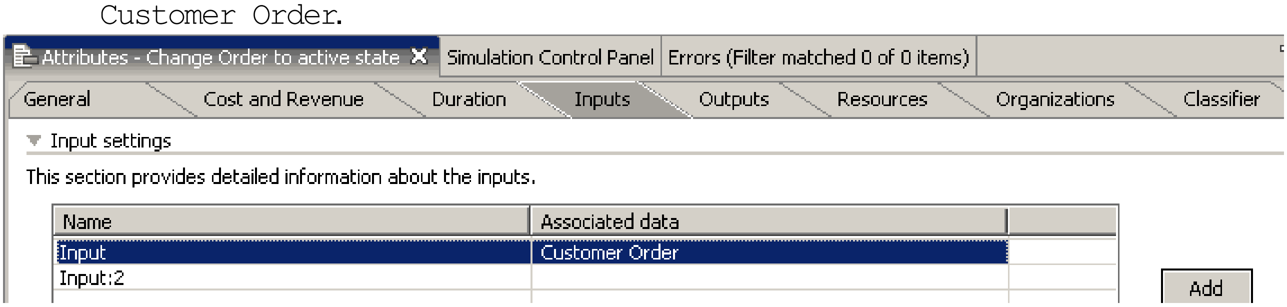
__ 14. Associate the remaining connectors to the `Customer Order` business item, except the ones connecting to the start and stop nodes:

Credit Verification Service --> `Merge` object

Obtain Product Availability --> `Merge` object

__ 15. Click the `Change Order to active state` Task.

__ 16. In the **Attributes view**, click the **Inputs** tab and associate the first input with `Customer Order`.



__ 17. Repeat the previous step to associate Customer Order to the input of the `Credit Verification`, `Obtain Product Availability`, and `Consolidate Order` Tasks.

__ 18. Save changes (Ctrl+S).

All red **X**s, which denote errors, should now be cleared from the process diagram.

__ 19. Click the **Errors** tab in the bottom pane.

With the changes and updates, all errors should be fixed. There should be no errors listed in the **Errors** View.

Part 8: Using the Modeler help

Use the search function in Help to locate the following topics and answer the questions.

__ 1. how shapes in Microsoft Visio are mapped to WebSphere Business Modeler elements?

____

__ 2. Exit WebSphere Business Modeler.

__ 3. Review the flashcards for this unit.

End of exercise

Appendix A. Project versioning using CVS

What this exercise is about

This lab covers the installation of CVS on the server machine and team support using CVS with WebSphere Business Modeler.

What you should be able to do

At the end of the lab, you should be able to:

- Set up a CVS client
- Create a new modeling project
- Add a project to CVS
- Make and manage changes in your project
- Create a new workspace and set up CVS client
- Update a project from the repository
- Work in a multiple-developer environment

Requirements

- CVSNT must be installed
- Download CVSNT from www.cvsnt.org

Instructor exercise overview

This is an optional exercise for version control using CVS. CVS must be installed in order to conduct this lab exercise.

Exercise instructions

Part 1: Setting up a CVS client

This section provides a hands-on experience with the version function in WebSphere Business Modeler. The following steps illustrate how to configure the CVS Repository perspective.

Note

The firewall on your computer must be disabled.

__ 1. Launch Modeler by clicking **Start** > **Programs** > **IBM WebSphere** > **Business Modeler**.

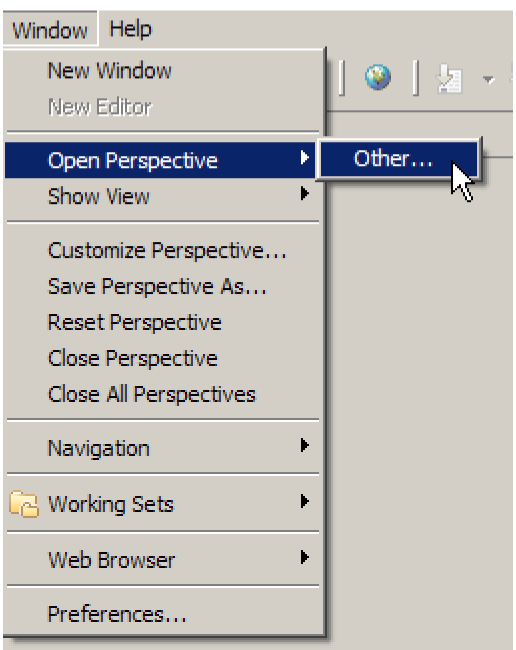
__ 2. Create a new workspace by typing **`C:\workspaces\Lab_cvs_user1`** in the field.

__ 3. Click **OK**.

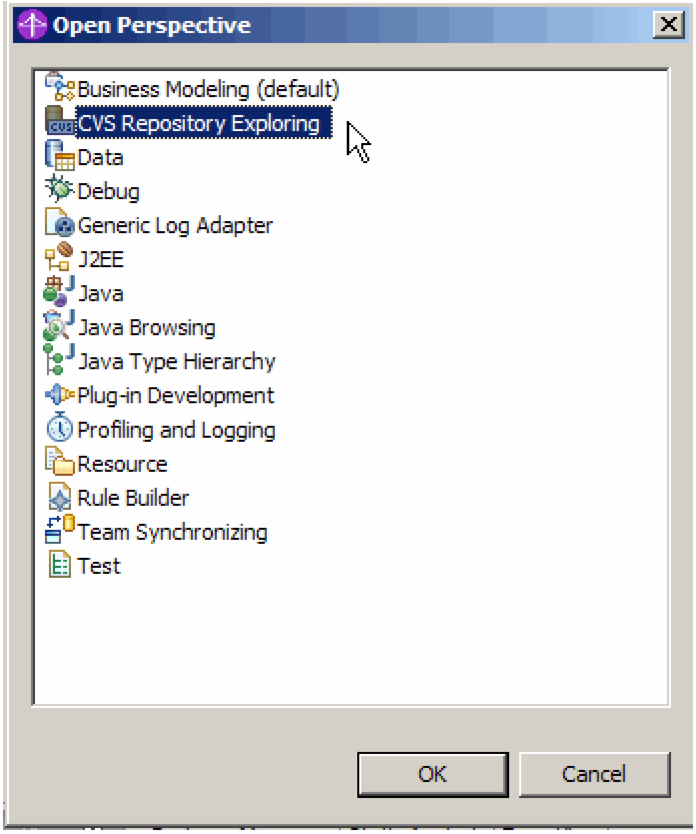
__ 4. At the **Quickstart wizard** dialog box, click **Cancel**.

__ 5. Close the **Welcome** page.

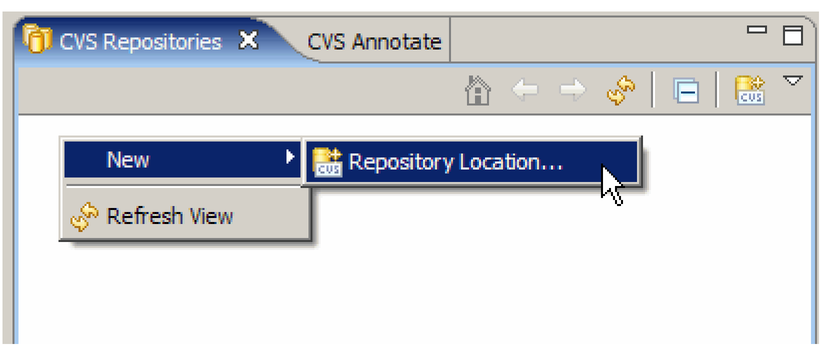
__ 6. From the menu bar, click **Window** > **Open Perspective** > **Other**.



__ 7. Select **CVS Repository Exploring** to open the CVS Repository Exploring perspective. Click **OK**.



__ 8. Add a new repository location by right-clicking the white space of the **CVS Repositories** view and selecting **New** > **Repository Location**



__ 9. Enter your CVS server's information.

__ a. **Host:** localhost or IP address of the server where CVS is installed

__ b. **Repository Path:** `/CVSNT/Repository`

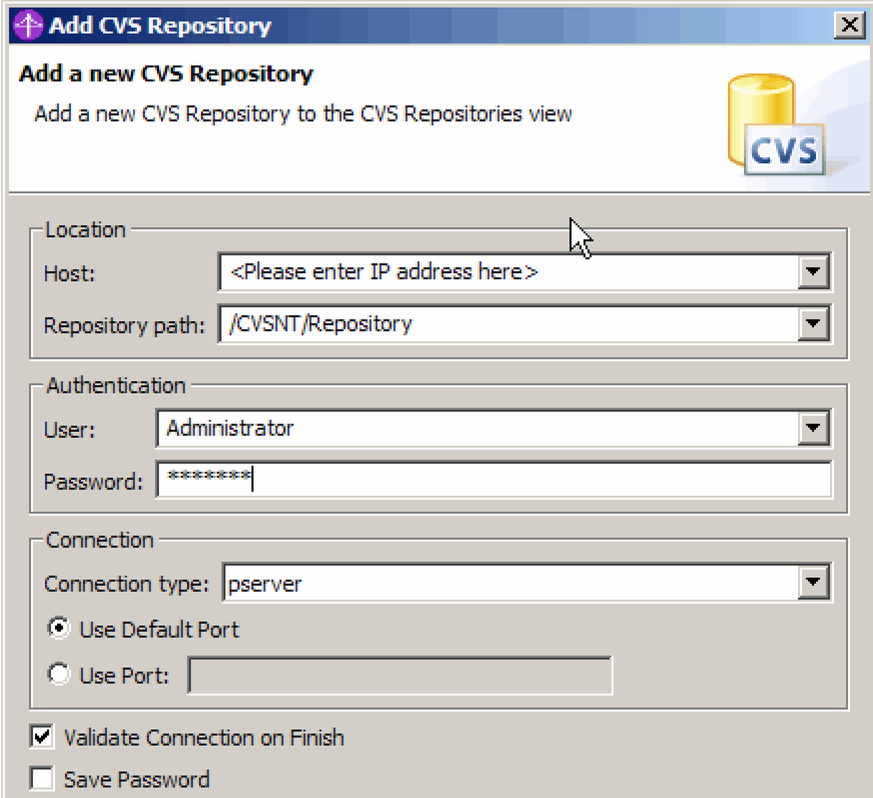
__ **c. User:** `Administrator`

__ d. **Password:** `web1sphere`

__ **e. Connection Type:** `pserver`

__ f. Verify that the **Use Default Port** option is selected.

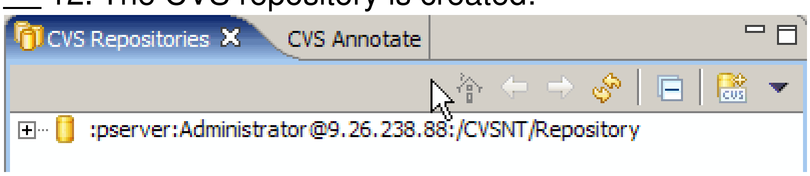
__ g. Verify that the **Validate Connection on Finish** check box is checked.



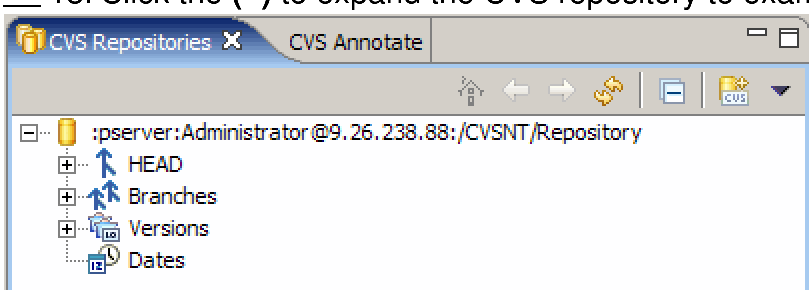
__ 10. Click **Finish**.

__ 11. If you encounter the **Unable to Validate** error message, click **Yes**.

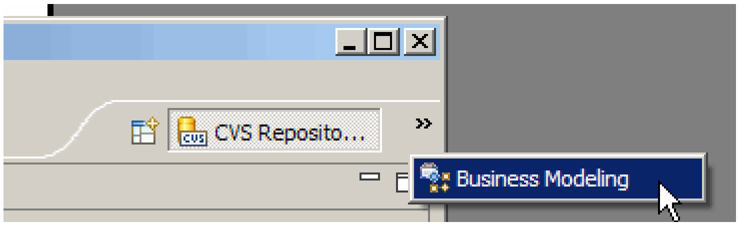
__ 12. The CVS repository is created:



__ 13. Click the **(+)** to expand the CVS repository to examine the structure.



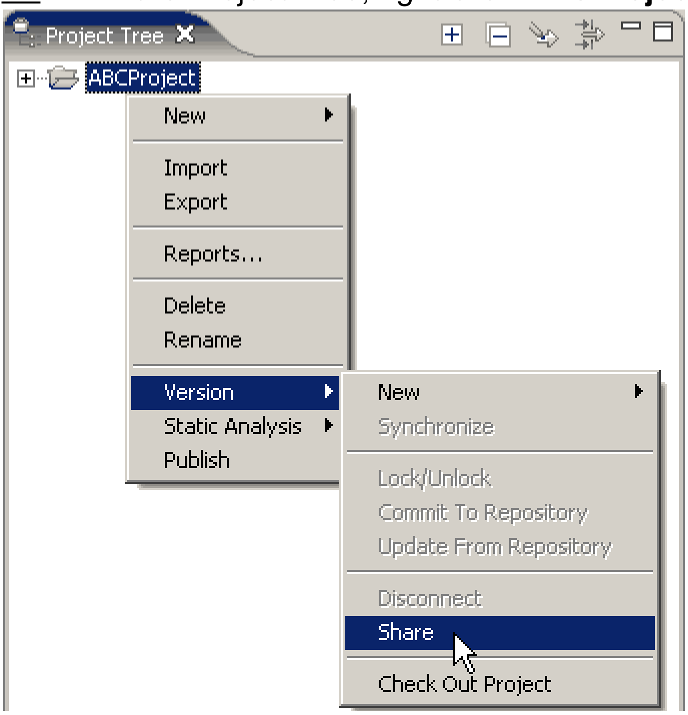
__ 14. Return to the Business Modeling perspective by selecting the **Business Modeling** button at the top right corner of the screen.



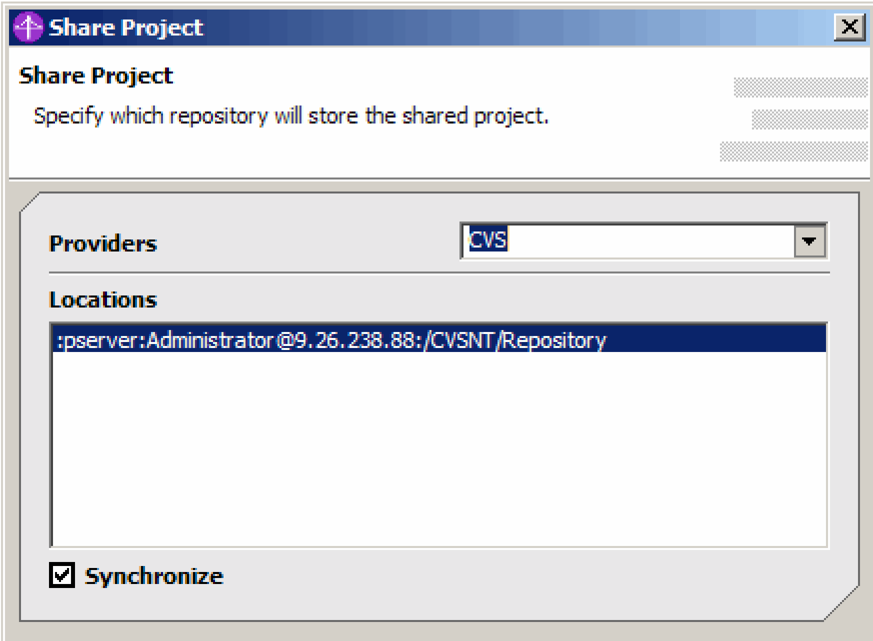
Part 2: Adding project to CVS

This section of the lab shows you how to add ABCProject to your CVS repository.

__ 1. In the Project Tree, right-click **ABCProject** and select **Version > Share**.



The **Share Project** wizard opens.



__ 2. Next to **Providers**, select **CVS**.

__ 3. Verify that the correct path is selected under **Locations**.

__ 4. Click **Finish**.

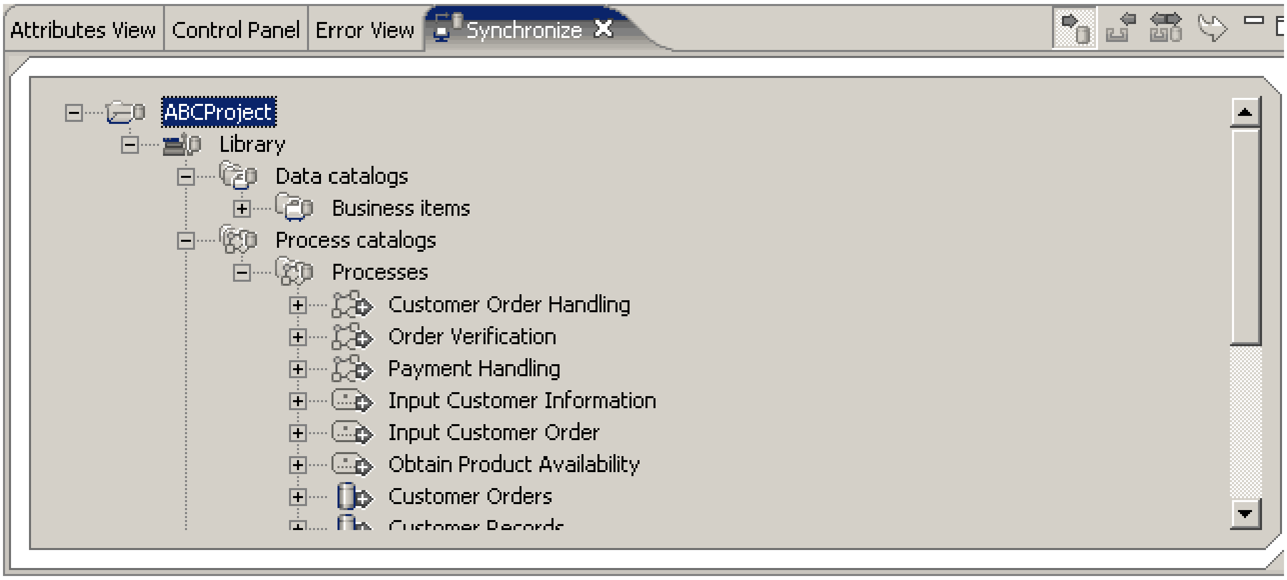
Note

If you clear the **Synchronize** check box, the Synchronize view will not be opened automatically after you click **Finish**. To open the Synchronize view later, right-click your project and select **Version > Synchronize**.

__ 5. If you encounter the **Authentication Error** message window, re-enter your password.

The CVS server will perform an authentication procedure and then create a folder with the same name as the project in your CVS repository. None of the objects in the project have been saved to the repository at this point.

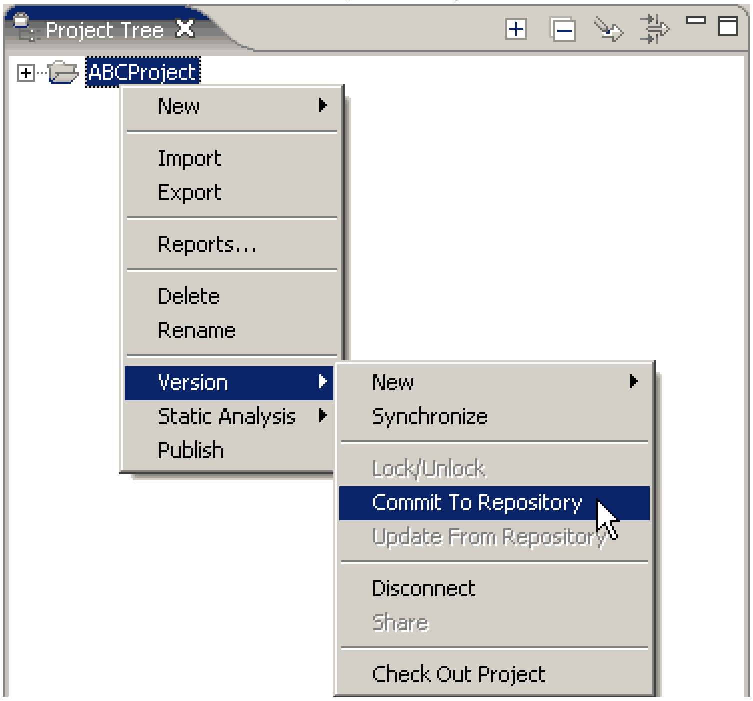
This will also open a new view in the Business Modeling perspective. This view will list every component in your project that has been added or modified since it was last committed.



You do not have to perform this synchronization step; instead, you can directly commit the project to the CVS repository since it is a new project.

When working with existing projects from a CVS repository, you should use the Synchronize command as a final check of what you are putting into the repository.

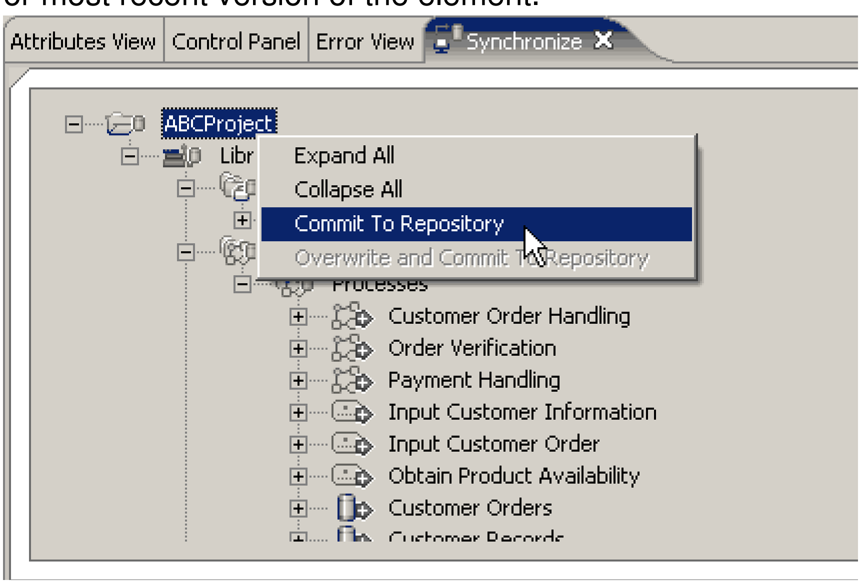
__ 6. In order to send the components of your project to the CVS repository, you must commit them. From the Project Tree view, right-click the project and select **Version > Commit To Repository**.



Note

Alternative method: From the **Synchronize view** in the bottom-right pane, right-click **ABCProject** and select **Commit To Repository**.

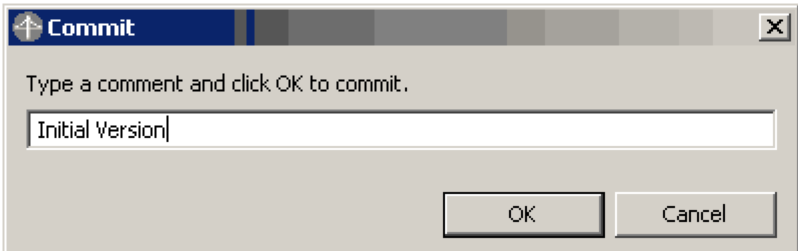
The **Commit To Repository** option displays when your local workspace contains the initial or most recent version of the element.



You can also commit individual resources, instead of sending the entire project. Since this is the first time the project is being committed, you should send the entire project. Later, you can commit only the components you changed.

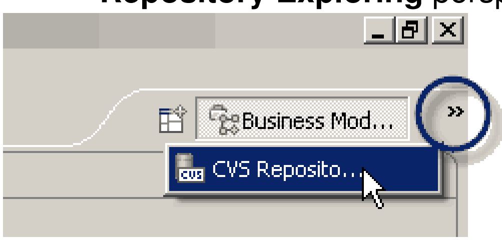
Note: Simulation profiles and snapshots cannot be committed to the repository.

__ 7. Executing the Commit command opens a dialog that prompts you for a comment. Enter **`Initial Version`** as the comment and click **OK**.

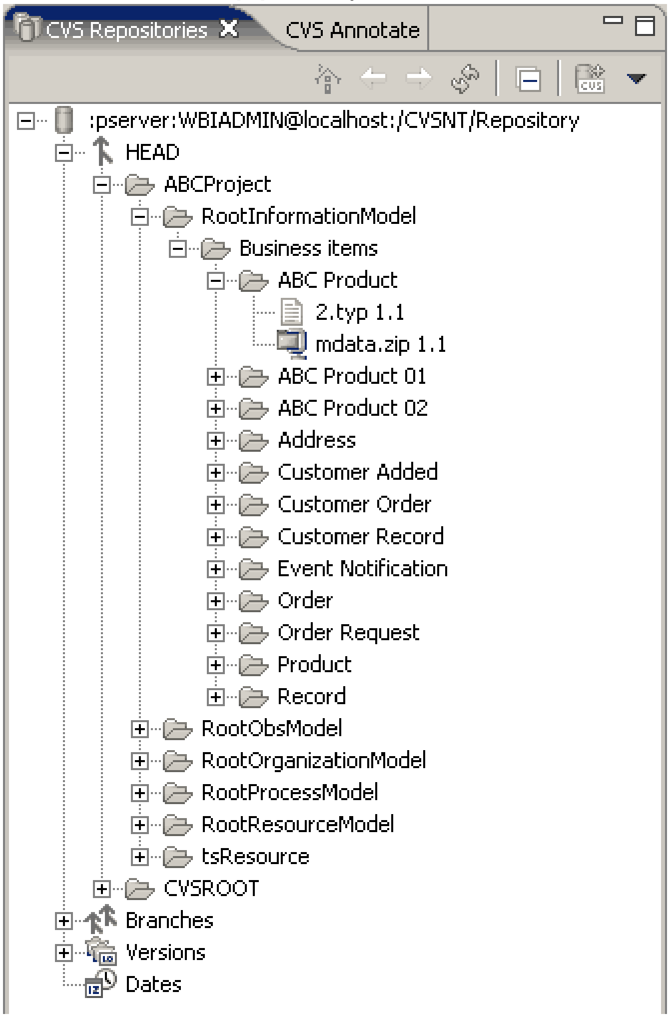


The tool will connect to the repository and transfer all the components of the project to the CVS repository. This process can take up to thirty minutes to complete. Assuming there are no conflicts or errors, you have successfully created your first version.

__ 8. You can confirm that the components have been committed by switching to the **CVS Repository Exploring** perspective.



__ 9. Click the **(+)** to expand the structure to browse the CVS repository.



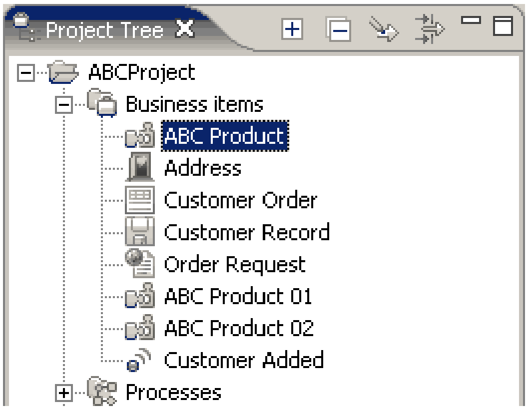
Part 3: Making and managing changes in your project

In this section of the lab, you will make modifications to your project, compare revisions, and examine object histories.

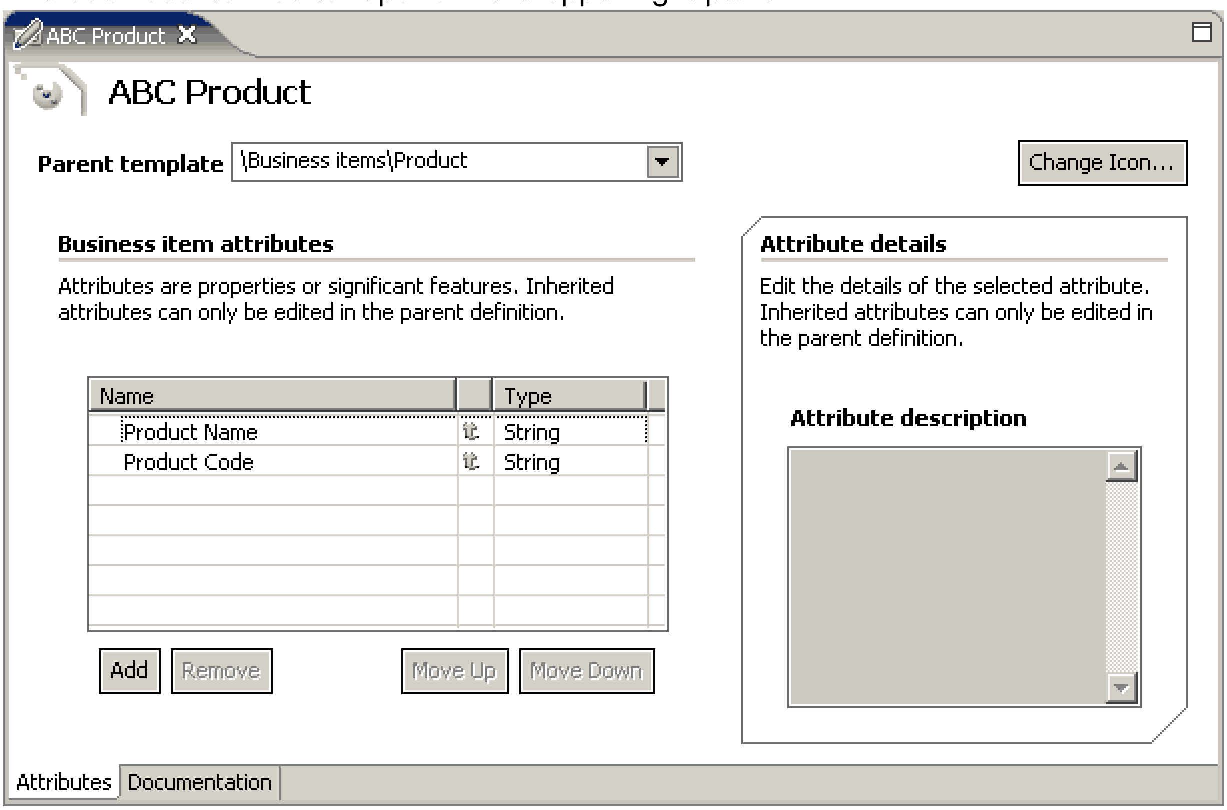
__ 1. Switch to the **Business Modeling** perspective.

__ 2. Add a new attribute called **Product Description** to the ABC Product business item:

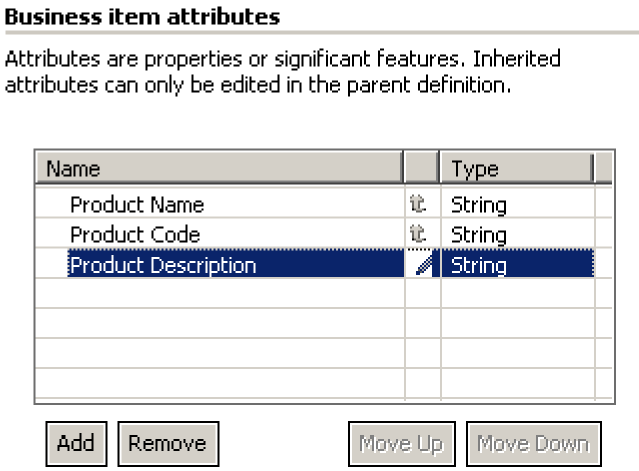
__ a. From the Project Tree, double-click **ABCProject** > **Business items > ABC Product**.



The business item editor opens in the upper right pane.

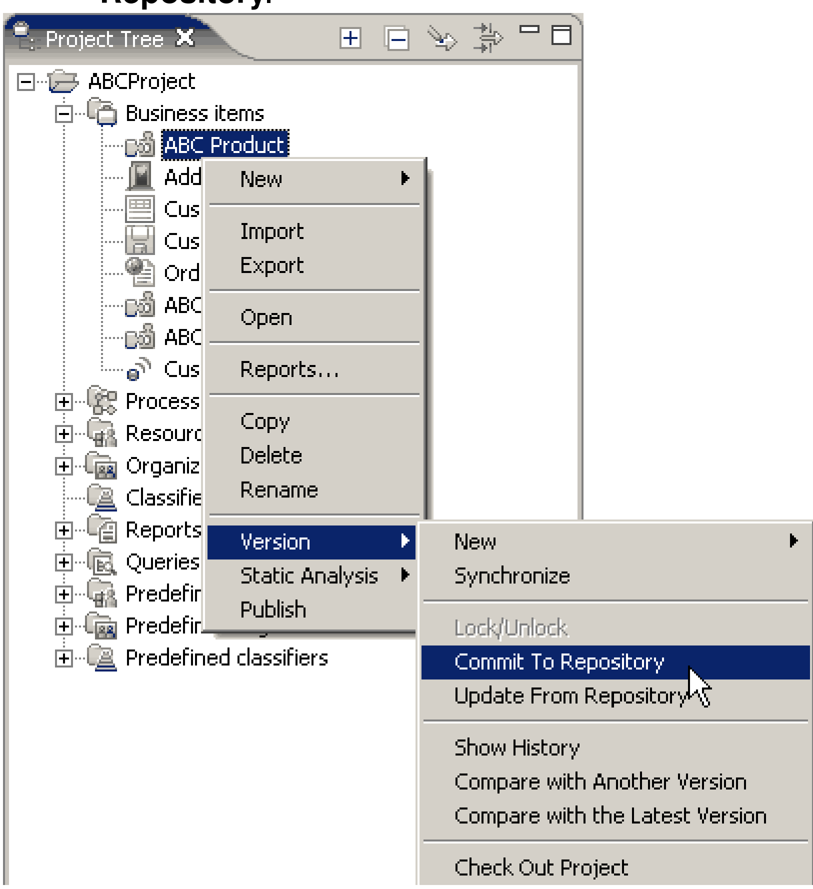


__ b. Click **Add** to add a new business item attribute called `Product Description`.

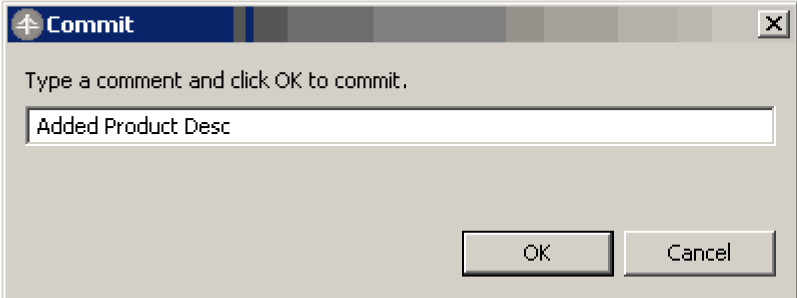


__ c. Save changes (Ctrl+S).

__ 3. In the Project Tree, right-click **Business items** and select **Version > Commit To Repository**.

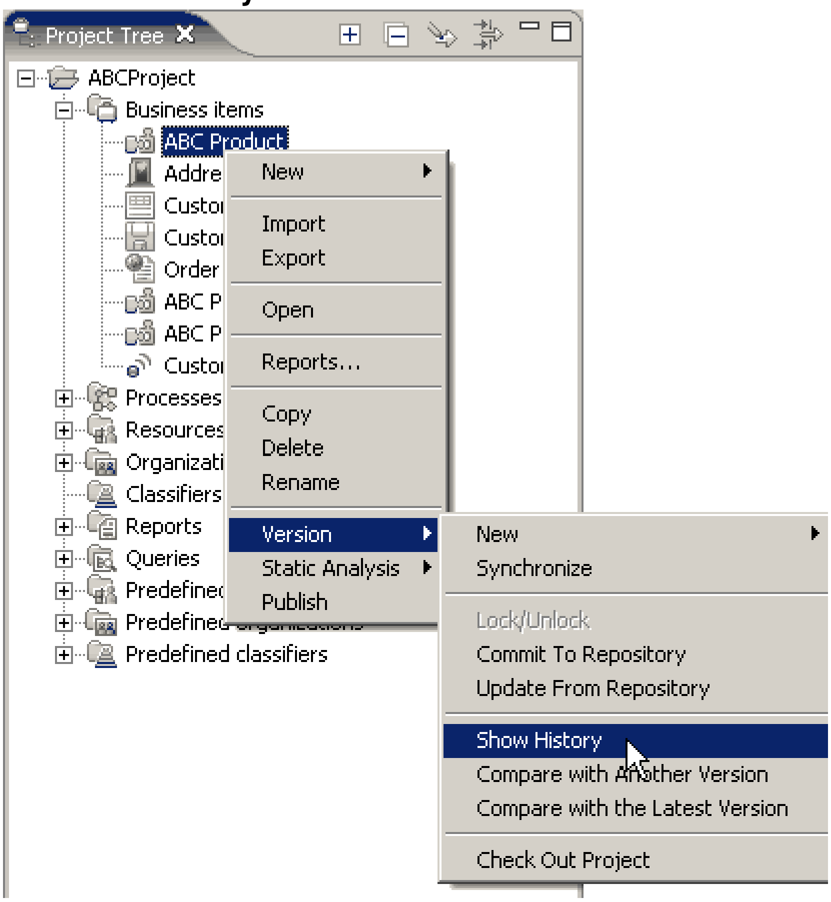


__ 4. Enter **`Added Product Desc`** as a comment and click **OK**.

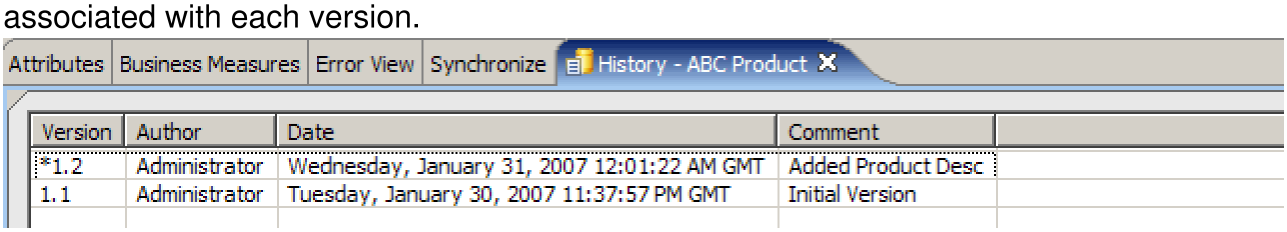


__ 5. Once you have committed to the repository, you can view the history of the component:

__ a. In the Project Tree, right-click **ABC Product** and select **Version > Show History**.



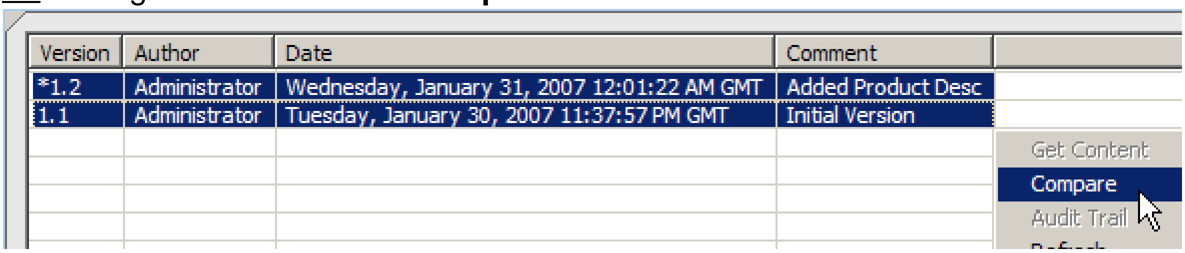
The **History view** opens and shows you the versions of the component and the comments associated with each version.



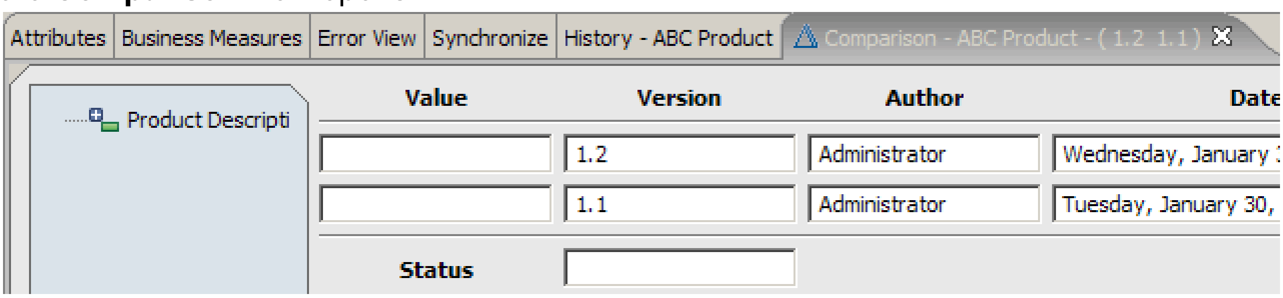
If you want to return to a previous version of a component, make certain that it is not open in any editor; then right-click the older version in the History view and select **Get Content**. The tooling will connect to the repository and retrieve the component. Open the component in an editor to verify that the previous version was successfully retrieved.

__ 6. To examine the differences between two versions, select both rows in the **History view** (hold the Shift key while clicking each row).

__ 7. Right-click and select **Compare**.



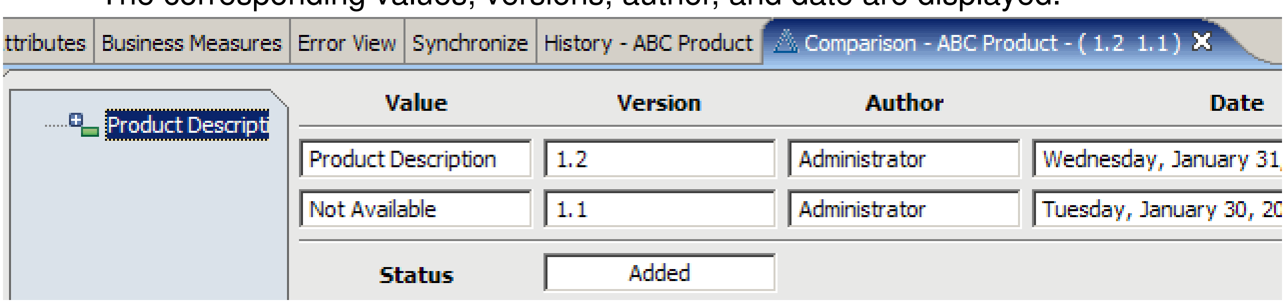
The tool connects to the repository and retrieves information regarding both versions. The the **Comparison** view opens.



By default, the **Comparison** view displays any attributes that have changed, when they changed, and who changed them.

__ 8. Click **Product Description** in the **Comparison** view.

The corresponding values, versions, author, and date are displayed.



Part 4: Creating a new workspace and setting up a CVS client

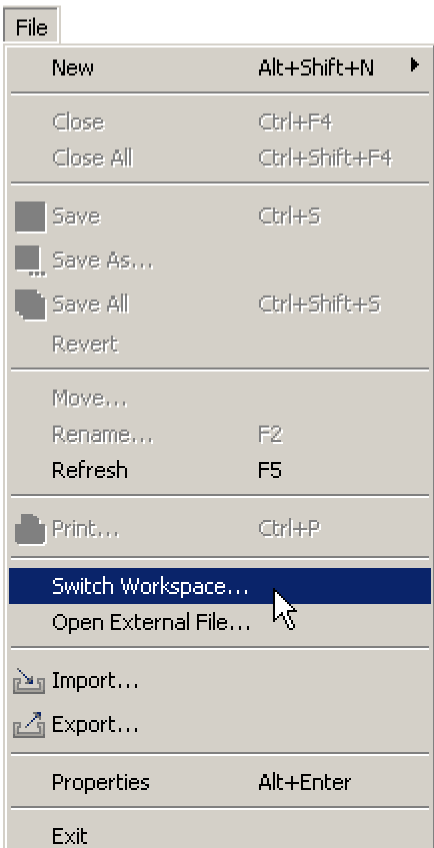
In this section of the lab, you will retrieve a project from the CVS repository that was not previously in your workspace. This is the sort of activity you would perform if you had a new

team member on your project, installed the Modeler on a new machine, or otherwise no longer had access to the local project.

You can check out a project from the CVS server. This enables you to work with and modify a local copy of the project. Before you can check out a project, you need to add the repository location to the CVS Repositories view in the CVS Repository Exploring perspective. Note that you can only check out a project if your local machine does not already have a project with the same name. If it does, you must delete the existing project before you can check out the CVS project.

In this section of the lab, you will be emulating a second user. The following steps walk through the creation of a new workspace and setup of the CVS client a second time.

__ 1. From the menu toolbar, select **File** > **Switch Workspace**.



__ 2. Create a new workspace by typing `C:\workspaces\Lab_cvs_user2` in the field.

__ 3. Click **OK**.

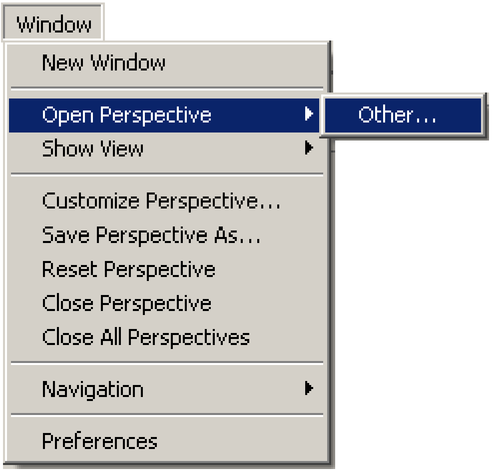
Modeler closes and restarts.

__ 4. At the **Quickstart wizard** dialog box, click **Cancel**.

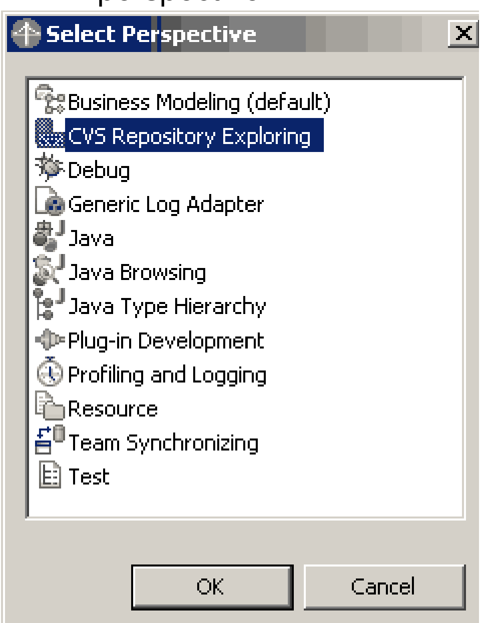
__ 5. Close the **Welcome** pane.

__ 6. Switch to **4-pane layout**.

___ 7. From the menu bar, click **Window > Open Perspective > Other**.

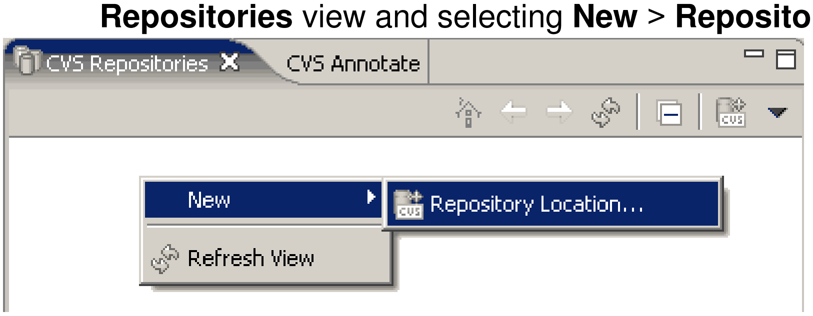


___ 8. Select **CVS Repository Exploring** to open up the **CVS Repository Exploring** perspective.



___ 9. Click **OK**.

___ 10. Add a new repository location by right-clicking the white space of the **CVS Repositories** view and selecting **New** > **Repository Location**.



___ 11. Enter your CVS server’s information.

__ a. **Host:** To be provided by instructor (host name of the server machine). For students enrolled in self-paced courses, enter `localhost`.

__ b. **Repository path:** `/CVSNT/Repository`

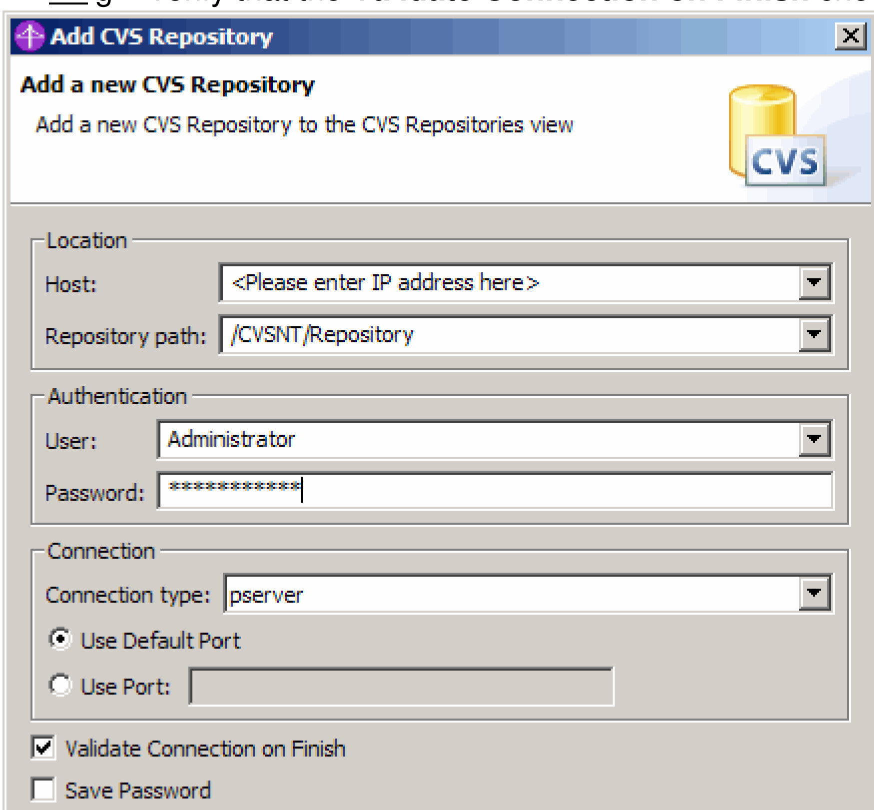
__ c. **User:** (user logon ID to the server machine, for example, `WBIADMIN`) For students enrolled in self-paced courses, enter the logon ID to your computer.

__ d. **Password:** (password to the server machine, for example, `wbi42x@IBM`) For students enrolled in self-paced courses, enter the password for your computer.

__ e. **Connection Type:** `pserver`

__ f. Verify that the **Use Default Port** option is selected.

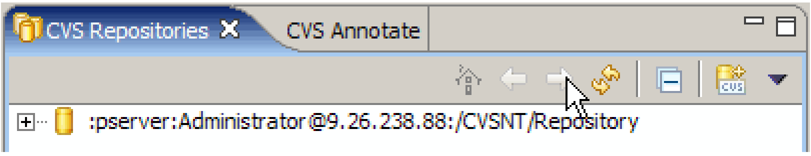
__ g. Verify that the **Validate Connection on Finish** check box is checked.



__ 12. Click **Finish**.

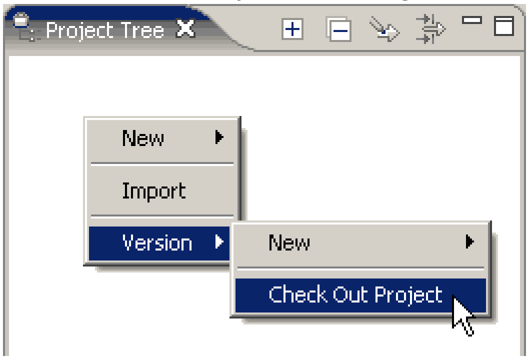
__ 13. If you encounter the **Unable to Validate** error message, click **Yes**.

The CVS Repository is created.

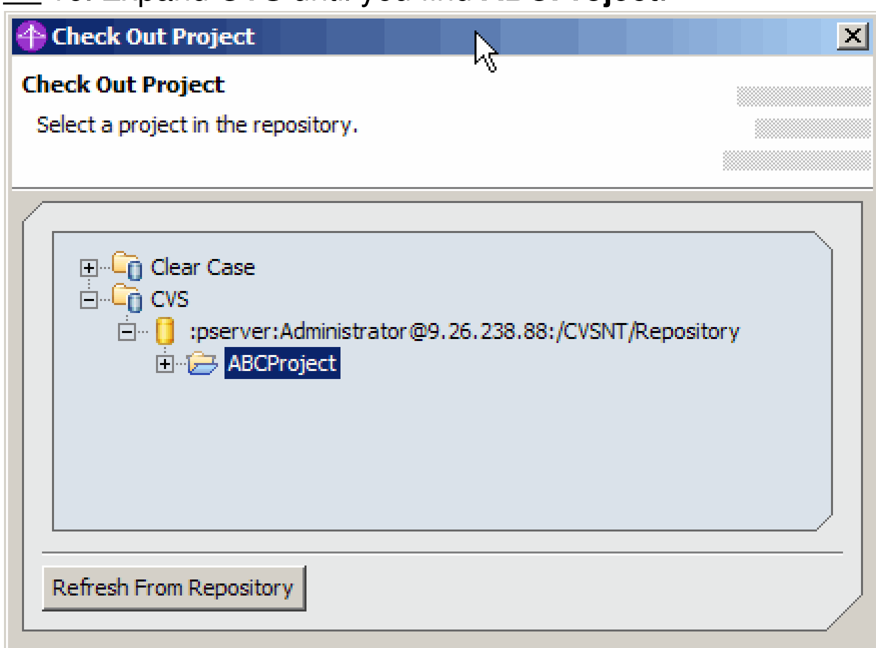


__ 14. Return to the **Business Modeling** perspective by selecting the **Business Modeling** button at the top right corner of the screen.

__ 15. In the Project Tree, right-click and select **Version > Check Out Project**.



__ 16. Expand **CVS** until you find **ABCProject**.



__ 17. Select **ABCProject** and click **Finish**.

ABCProject is now available in the Project Tree.

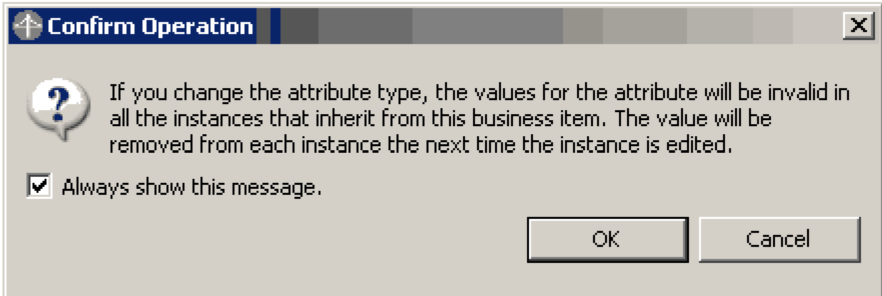
__ 18. Add another new attribute called `Price` to the ABC Product business item:

__ a. From the Project Tree, double-click **ABCProject** > **Business item** > **ABC Product**.

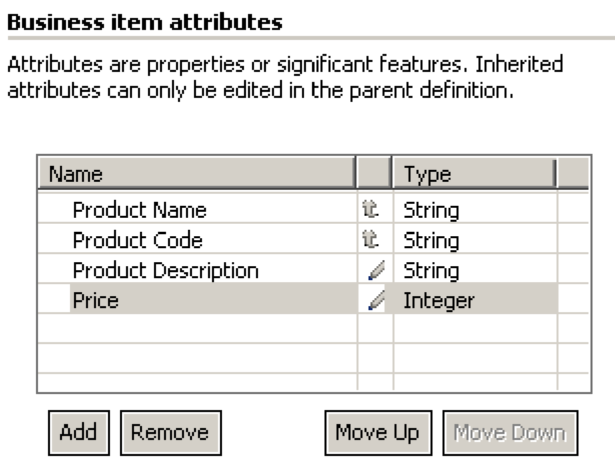
__ b. Click **Add** to add a new business item attribute called `Price`.

__ c. Change the type to **Integer**.

__ d. If the **Confirm Operation** dialog box appears, click **OK**.



There should be four attributes displayed:

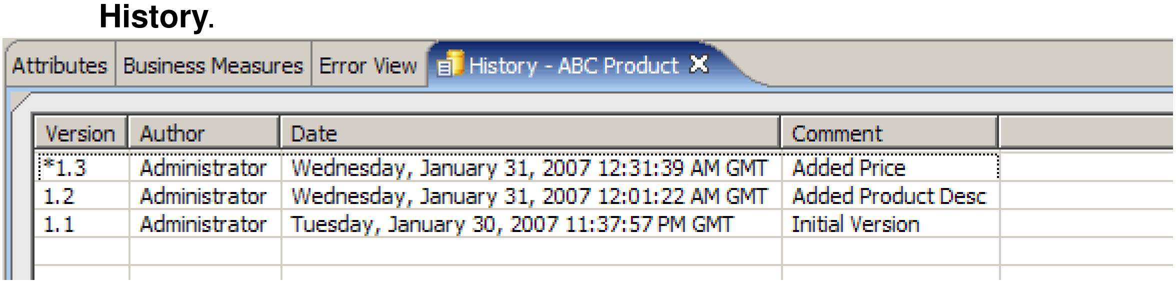


__ 19. Save changes (Ctrl+S).

__ 20. In the Project Tree, right-click **Business items** and select **Version > Commit To Repository**.

__ 21. Enter `Added Price` as a comment and click **OK**.

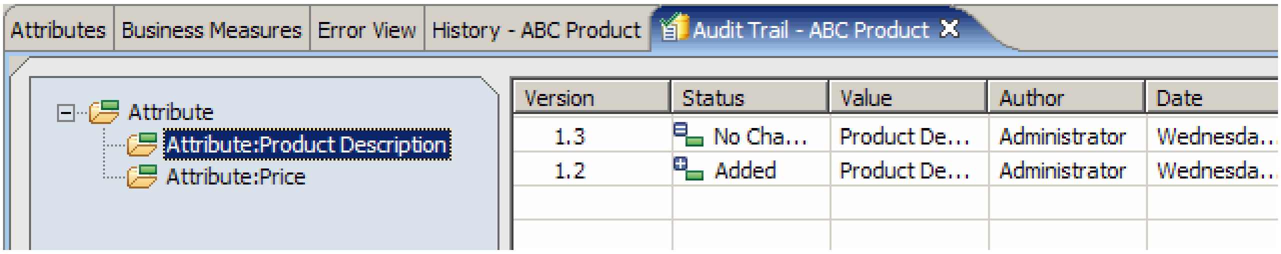
__ 22. Right-click **ABC Product** from the Project Tree and select **Version > Show History**.



__ 23. Select all three revisions in the History view, right-click, and select **Audit Trail**.

The tool connects to the repository and retrieves information regarding all versions.

The **Audit Trail** view opens.



As you select attributes in the left pane of the view, you will see a listing of information about when changes were made. In the example above, you will see that the attribute “**Product Description**” was added in version 1.2 and there were no changes to the attribute in version 1.3. If you select ***Attribute: Price***, you will see that the **Price** was added in version 1.3.

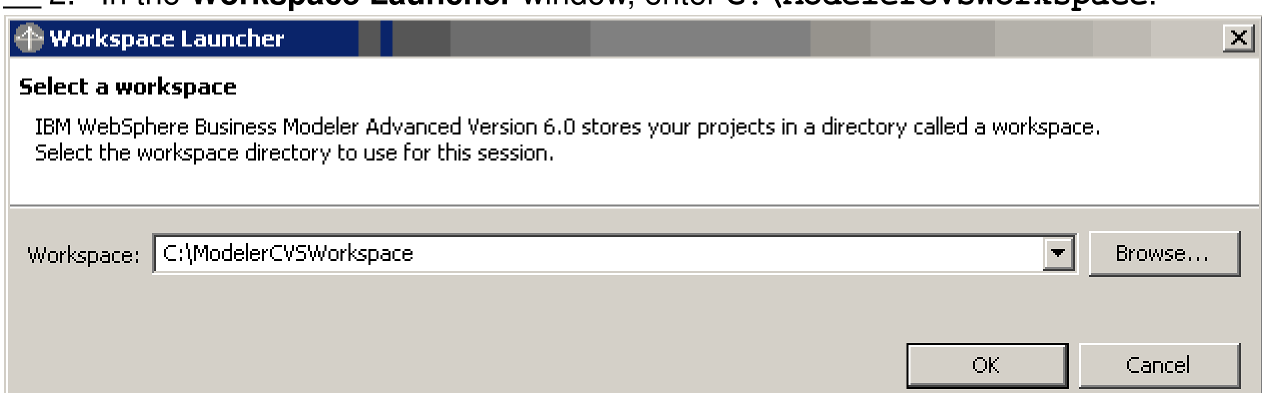
For some components such as tasks in a process, you can also view more details. Perform an audit of a process that has had three or more versions, and then select one of the changed attributes. You should see the **Show Details** command. If you select the show details command, the Comparison view will open and allow you to see the specific values that have changed.

Part 5: Update project from repository

In this section of the lab, you will switch to the workspace of the first user and synchronize the ABC Project.

__ 1. From the **Menu** toolbar, select **File** > **Switch Workspace**.

__ 2. In the **Workspace Launcher** window, enter `C:\ModelerCVSWorkspace`.

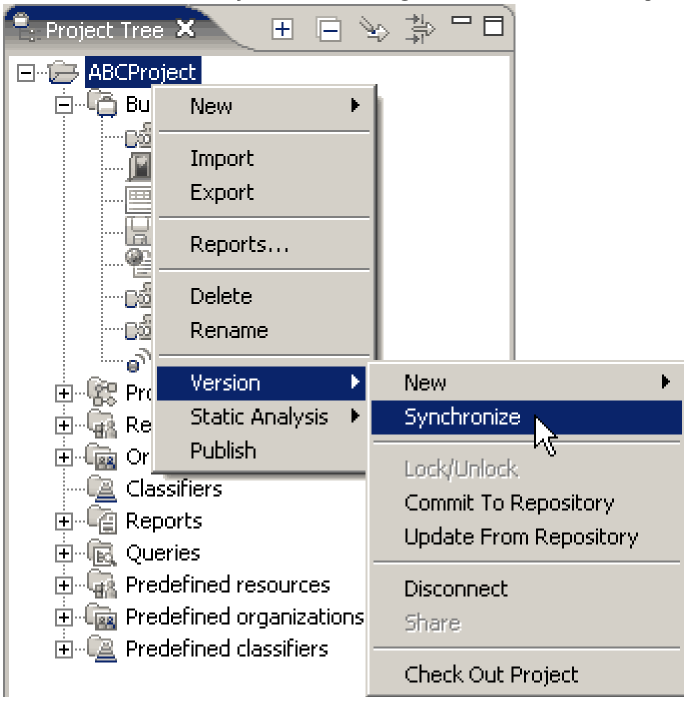


__ 3. Click **OK**.

Modeler closes and restarts.

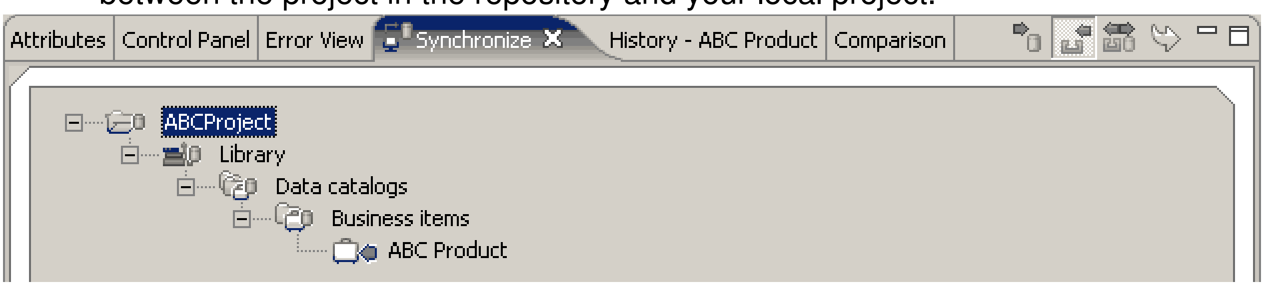
__ 4. If the **Quickstart wizard** dialog box appears, click **Cancel**.

__ 5. In the Project Tree, right-click **ABCProject** and select **Version > Synchronize**.



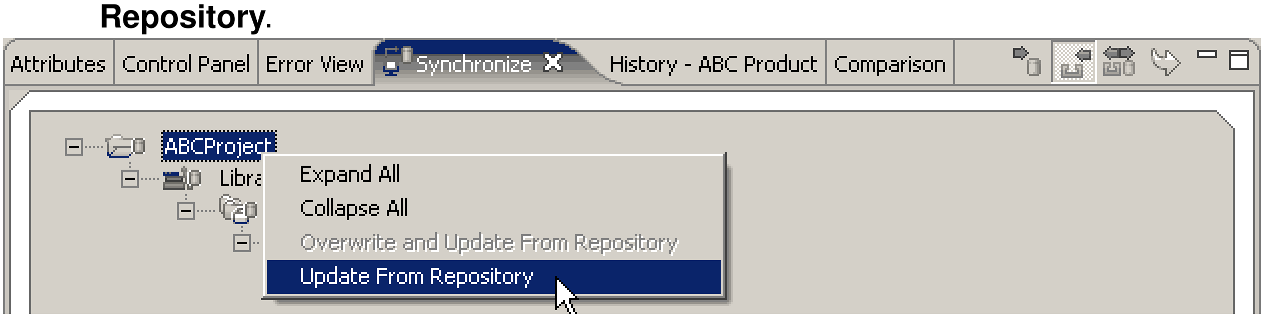
__ 6. If you encounter an authentication error, enter the password to the CVS server and click **OK**.

__ 7. In the **Synchronize** pane, expand the nodes of **ABCProject** to find the differences between the project in the repository and your local project.



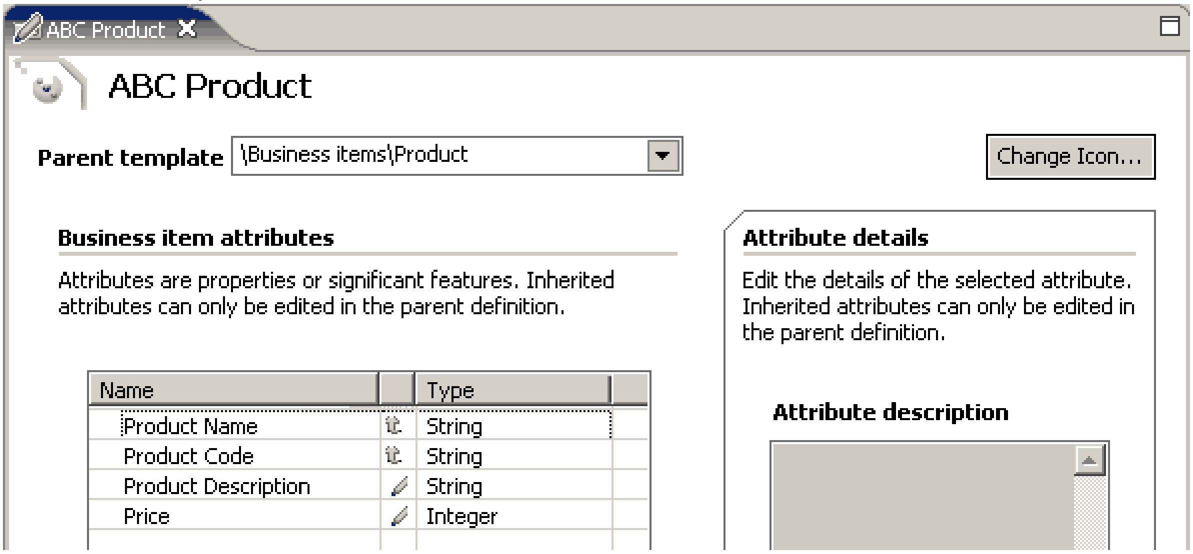
Since ABC Product was the only element modified, the **Synchronize** view lists only this item.

__ 8. In the **Synchronize** view, right-click **ABCProject** and select **Update From Repository**.



__ 9. Once the local project has been updated with the changes, the Synchronize view no longer displays any elements.

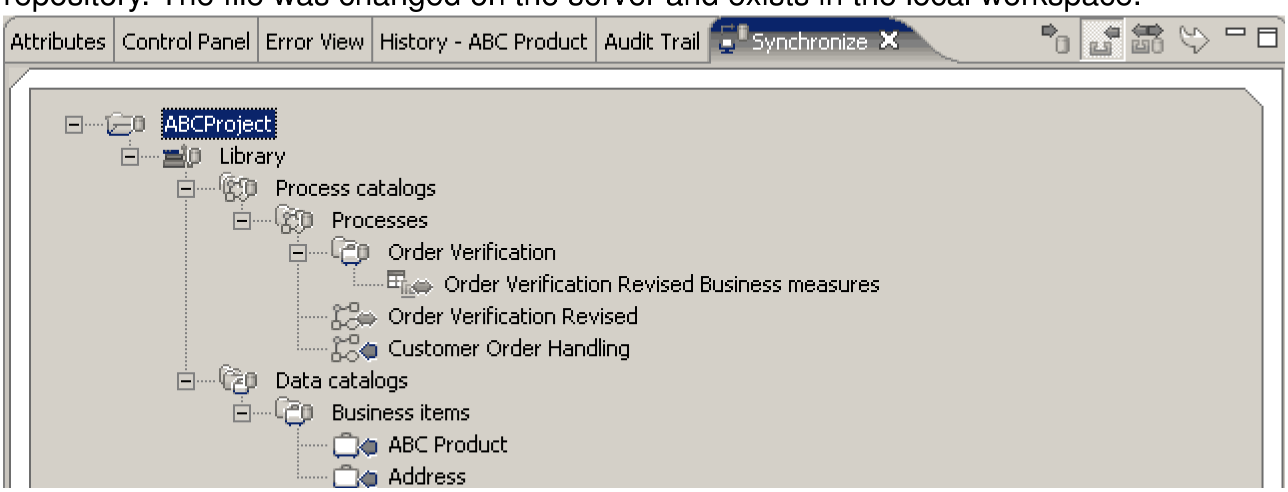
__ 10. In the Project Tree, double-click the **ABC Product** business item to verify that it has been updated with the **Price** attribute.



Now you may explore the project in your local machine, show the history of components, and so on. Note that all of the functions you explored earlier in this lab are available. Once you have retrieved the project you can also retrieve earlier versions of the components by using the **Get Content** command from the **History** view.

Part 6: Working in a multiple developer environment

When you have multiple developers working on a project, there are additional functions that become relevant. In the screen capture below, you can see what happens if a different person makes changes to the repository. The local workspace is out of sync with the CVS repository. The file was changed on the server and exists in the local workspace.



In dealing with situations like this, you have several options.

<u>Option 1</u>

You can accept that the server version is correct. Right-click the project and select **Version > Update**. This will retrieve the most current version of all components of the project.

<u>Option 2</u>

You can treat each case individually. Right-click the project and select **Version > Synchronize**. Expand the project in the Synchronize view and in each case of a conflict, resolve it either by updating or overwriting and updating it.

Feel free to work with another student in the workshop to explore this functionality.

You may play the flashcard game after completion of the lab exercise.